

## WCMRC 2017 1000T Exercise

### After Action Review

#### Overview

On the date of May 3, 2017, WCMRC conducted its annual Tier 2 tabletop exercise. The exercise was jointly planned and conducted with Crowley Maritime, and simulated the response to a spill of approximately 1987 tonnes of ultra-low sulfur diesel (ULSD) in the waters outside of Victoria Harbour.

As described in WCMRC's Oil Spill Response Plan (OSRP), the purpose of the exercise is to demonstrate and evaluate the effectiveness of the response capability, utilizing a defined scenario that includes notification, spill assignments, and the activation of spill management personnel for a response to a spill of up to 1,000 tonnes. As well as achieving proscribed objectives related to certification as defined in the OSRP, WCMRC's Exercise Program also serves to further the training of WCMRC and external responders, and identify areas within the Incident Command System, training programs and response procedures that can be improved upon.

The purpose of this After Action Review is to serve as an aid to evaluation and continuous improvement, by examining the actions taken to achieve the objectives and how they relate to the expected action as defined. Based on the results of this analysis, recommendations will be made to make improvements and learn lessons. An improvement plan will then be outlined to detail how these lessons will be incorporated not only into future exercises and responses, but into WCMRC's day-to-day operations as a whole.

#### Exercise Objectives, Observations and Recommendations

WCMRC's Exercise Program is carried out over a three year period, and is fully described in Section 13 of the OSRP. This section has details regarding the objectives, response functions and goals to be exercised over the certification cycle.

For this particular exercise, WCMRC defined the following objectives, along with expected actions and evaluation criteria.

**Objective:** Evaluate the effectiveness of the Duty Officer SOP through the notification and activation of WCMRC and the signing of a work order with Crowley's signing authority

**Expected Actions:**

- Duty Officer will receive initial call from Emergency Line, reach initial caller and collect information for duty officer quick hits
- Duty Officer will determine if the caller is a member, and will complete the work order and a third party agreement if necessary
- Duty Officer will make necessary internal notifications as per SOP to engage support and scale up response
- Duty Officer will make necessary external notifications as per SOP

**Evaluation Criteria:**

- Duty Officer will receive call from Emergency Line within 10 minutes, and will receive adequate information to reach initial caller
- Duty Officer will record 'quick-hits' information as per Duty Officer SOP

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- Duty Officer will use available information to determine that the caller is a member
- Duty Officer will complete an initial work order and third party agreement (if necessary) to be signed by an authorized signee
- Internal notifications will be made as per Duty Officer SOP
- External notifications will be made as per Duty Officer SOP

### **Observation:**

A timeline of events related to this objective are as follows:

0656: WCMRC Duty Officer receives initial call, reaches caller and collects quick-hit information

0700: Internal notifications are made (WCMRC VI Operations Supervisor, and Director of Operations)

0707: External notification to Transport Canada; cascading support requested from WCMRC SC Area Manager

0717: Crowley membership and signing authority confirmed

0744: First work order sent to Crowley (no third-party agreement necessary)

0820: First work order received by WCMRC, signed by Crowley signing authority

0953: Second work order sent

0958: Second work order received by WCMRC

With the assistance of WCMRC IT staff, the Duty Officer utilized a tablet and electronic forms as much as possible to run through the processes of the Duty Officer SOP; there were some technical difficulties encountered, but largely the technology worked successfully.

### **Recommendation:**

WCMRC should continue to develop the tablets for Duty Officer usage, and train on their use. In order to build experience and confidence using the tablets, WCMRC should conduct workshops and small exercises on the Duty Officer SOP.

**Objective:** Evaluate the effectiveness of decision making based off of information gathered, leading to appropriate deployment of resources and personnel

### **Expected Actions:**

- Equipment resources deployed will be appropriate for response to diesel spill
- Adequate storage capacity will be mobilized for the response
- Personnel activated will be appropriate for establishing span of control during a major response

### **Evaluation Criteria:**

- Recovery assets mobilized will be effective for diesel recovery, including grooved disc and fuzzy disc skimmers
- Given the size of the spill is in excess of Tier 2, and approaching Tier 3, WCMRC will mobilize at least 760 tonnes of storage capacity as part of the response
- An Organization Chart will be developed whereby any responder in a supervisory position has no more than 7 direct reports (but ideally 4-5 maximum), and the principle of unity of command is preserved

### **Observation:**

WCMRC Duty Officers gathered the initial information from the caller that the incident comprised a diesel spill, however there was some confusion that arose over the volume reported by the caller (due to imperial units, not metric units used), the further risk of spillage, and the general nature of the incident. It was clarified that there was a spill of approximately 1987 tonnes of ultra-low sulfur diesel due to a collision between an ATB and a bulk carrier outside of Victoria Harbour; at the time, risk of further spill was still unknown. Recognizing the product spilled, WCMRC mobilized recovery assets including grooved disc skimmers, fuzzy disc skimmers and portable skimmers with disc inserts installed. WCMRC mobilized storage and skimming capacity well in excess of Tier 3

requirements, given the size of the incident; however, boom capacity mobilized did not meet the requirements for a Tier 3 incident in the Primary Area of Response (PAR).

A summary of equipment mobilized by WCMRC includes:

Storage: 6321T

Boom: 7566M

Skimming: 147.2T/HR

Equipment requirements for a Tier 3 (2500T) incident in the PAR:

Storage: 760T

Boom: 8275M

Skimming: 6.26T/HR

**Recommendation:**

WCMRC should build into the Duty Officer SOP steps repeating information collected to ensure it is complete and accurate. WCMRC should also ensure that when a response is escalated and a senior management member takes over the role of Spill Response Manager, a follow up communication is made to the RP to validate the initial information collected, and receive any new updates on the situation. WCMRC should also build into plans, SOPs and training for initial response actions, ideal equipment, tactics and considerations for different product types.

**Objective:** Evaluate the effectiveness of tactics development appropriate to diesel spill response

**Expected Actions:**

- Containment tactics developed will be appropriate to diesel spill response
- Recovery tactics developed will be appropriate to diesel spill response
- Storage tactics developed will continuous skimming operations
- Protection tactics developed will be appropriate to diesel spill response

**Evaluation Criteria:**

- Containment tactics developed will include implementation of secondary containment booming, lined with sorbent boom around the casualty
- Recovery tactics developed will include the use of grooved or fuzzy disc skimmers and sweep task forces where appropriate
- Storage tactics developed will ensure adequate shuttle storage capacity is available to support continuous skimming operations, and secondary storage capacity is available within 30 minutes transit time
- Protection tactics developed will include double booming strategies lined with sorbent boom

**Observation:**

Primary containment boom was established around the casualty with 24" curtain boom (GP Boom) and this was lined with sorbent boom for passive recovery where possible. It was identified that a secondary containment of offshore boom was planned to be established when possible, as this would be a more suitable boom for the environment.

There was some discussion within the IMT over the priority, or even necessity of establishing containment boom around the casualty, when it was reported by the vessel master that the ship was stable, and no further spillage was anticipated; however, this was considered a prudent course of action given the further risks presented by the ~9900 tonnes of diesel fuel remaining in the damaged barge.

Recovery tactics initiated included a fuzzy disc skimmer deployed into the containment boom around the casualty, a skimming vessel specified with grooved disc skimmers, and all portable skimmers with disc inserts installed. Using available offshore boom, vessels were tasked to deploy sweeps in order to collect and recover product from the surface.

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Two 40 tonne mini-barges were mobilized to help ensure adequate storage capacity was available to support skimming operations, and two response barges were mobilized to the immediate area to minimize transit time for transfers.

Areas identified for shoreline booming were also planned to be double boomed, lined with sorbent boom for passive recovery.

### **Recommendation:**

WCMRC should continue to plan, train and exercise according to different product types. Additional awareness training on the considerations for responding to different products as they weather and change over time would be valuable for responders.

**Objective:** Evaluate the effectiveness of integration with Crowley's IMT in staffing an Incident Command Post

### **Expected Actions:**

- WCMRC personnel will fill Section Chief or Deputy roles in all ICS sections, as requested by the RP
- RP personnel will fill key roles as necessary in the ICS structure

### **Evaluation Criteria:**

- WCMRC will have a Section Chief or Deputy in each ICS section
- RP personnel will key roles as determined necessary by their procedures

### **Observation:**

Crowley and WCMRC staff effectively integrated within the IMT; WCMRC staff fulfilled Section Chief roles, and Crowley staff assimilated within each section took Deputy roles as appropriate. Crowley also verbalized during the exercise that they were impressed with WCMRC's running of the IMT and they would support WCMRC personnel staffing their IMT in a response situation, including key positions.

### **Recommendation:**

As is organizational practice, WCMRC should continue engaging with membership and government agencies in the response community, emphasizing that WCMRC personnel can fill both key and support roles in an IMT, and can effectively integrate into any ICS structure as it is set up.

**Objective:** Evaluate the effectiveness of WCMRC's internal ICP network setup

### **Expected Actions:**

- WCMRC's internal network will be set up for use during the exercise, and will be accessible by both WCMRC responders and external responders working in the ICP through wireless connection

### **Evaluation Criteria:**

- Both WCMRC and external responders will have access to the network setup
- The network will function with no downtime

### **Observation:**

The internal WCMRC ICP network setup worked effectively throughout the multiple rooms. All IMT members had access to the wireless connection and printers, and access was greatly simplified by avoiding the need for every individual to have to sign onto the local wireless network – a great advantage if working in an environment with a very secure network. No issues were noted by the Comms Unit staff regarding downtime.

### **Recommendation:**

WCMRC should continue to seek internal feedback on how to improve and utilize this capability, and seek ways of integrating it into response activities through exercises and training opportunities.

**Objective:** Evaluate the effectiveness of joint mobilization of internal staff from Duncan and contractors from Victoria area

**Expected Actions:**

- Upon activation from the Duty Officer, WCMRC responders will mobilize from Duncan, and contractor responders will mobilize from the Victoria area

**Evaluation Criteria:**

- WCMRC responders will reach the Victoria area in approximately 2 hours, complete with resources as directed by the Duty Officer
- Contractor responders will reach the Victoria area in approximately 2 hours, complete with resources as directed by the Duty Officer

**Observation:**

As a planned component of the ICP exercise, WCMRC and contractor responders were mobilized from the Duncan office and the Victoria area, respectively, at approximately 0710, and were 'on scene' outside of Victoria Harbour with the Burrard Cleaner No. 4 and Burrard Cleaner No. 11 at 0915, approximately 2 hours after being mobilized.

**Recommendation:**

WCMRC should continue to exercise and evaluate response times, particularly in remote areas where there will be reliance on the contractor network to be the first responders on scene to an incident.

**Objective:** Evaluate the effectiveness of on-water deployment of two protection strategies designated by ICP

**Expected Actions:**

- Two Geographic Response Strategies (GRS) will be communicated to responders in the field
- GRS booming will be deployed in the field by responders
- Status on the deployment will be communicated from the field to the ICP to update situational awareness
- Communications between the ICP and the field will follow the Communications Plan developed

**Evaluation Criteria:**

- Responders will receive and understand the task assigned
- GRS booming will be deployed within 3 hours of responder arrival to the Victoria area
- Responders in the field will communicate with Operations section in the ICP upon reaching the area, deploying equipment and completing the task
- Communications will follow the Communications Plan developed

**Observation:**

As a planned component of the ICP exercise, WCMRC and contractor responders mobilized to the field were tasked to implement two protection booming strategies. The IMT communicated the Geographic Response Strategy 2-pager forms to the responders via email, where they were implemented according to the information set out in the forms; a report on completion was communicated back to the ICP from the field via radio.

**Recommendation:**

As part of the Coastal Response Program, WCMRC should continue to develop Geographic Response Strategies, and train on their implementation. As well, exercising this concept could be expanded to include presenting the IMT with a scenario and variables, whereby they must determine the suitable GRS to be implemented, and then communicate that to the field for deployment.

**Objective:** Evaluate the effectiveness of Joint Information Centre (JIC) activation

**Expected Actions:**

- A JIC will be activated including WCMRC, Crowley, CCG and City of Victoria

**Evaluation Criteria:**

- The JIC will simulate the release of an approved joint media statement describing the events of the incident

**Observation:**

A JIC was formed, including participants from WCMRC, Crowley, Canadian Coast Guard, City of Victoria, Greater Victoria Harbour Authority, and BC Ministry of Environment. A joint media statement was released at 1218. The JIC was observed to respond very well to inquiries from the media and public simulated through SIMCELL, but could improve the sharing of information with the rest of the IMT when important information is relayed through them.

**Recommendation:**

WCMRC should continue to exercise the JIC to build relationships and awareness with members of the response community involved in the Information and Liaison Officer roles. WCMRC should ensure that a holding statement is promptly released prior to the development of a more thorough statement or press conference; responders likely to be involved in a JIC should develop an agreed upon template for immediate use. In the future, it should be ensured that the Information Officer is well versed in any Critical Information Requirements as determined by Command, that this information is passed to the JIC as a whole, and can be relayed back to the Situation Unit and Command so that the information can be disseminated and acted upon as required.

## Other Debrief Items and Recommendations

**Item:** ICS 201

**Observation:** The ICS 201 form was used by Operations staff to record information related to the ongoing response; however, there was confusion and uncertainty regarding what, when and how information should be captured on the form.

**Recommendation:** WCMRC should ensure Duty Officers are regularly trained on the purpose of the ICS 201 and how it is to be used; this function can be evaluated and refined in small workshop exercises to build experience and comfort. It is also recommended that support staff or a scribe be assigned as soon as practical to the Operations responder tasked with maintaining the ICS 201 to assist in filling it out.

**Item:** SimCell

**Observation:** This exercise was the greatest extent to which WCMRC has employed a Simulation Cell (SimCell) in recent history. The SimCell provided excellent means through which to introduce injects and challenges to participants of the exercise, and in this way greatly helped make the activities more immersive. However, confusion arose on several occasions between the 'truth' being provided by SimCell, and the parallel field operations, and which was to be taken as reality in the context of the exercise.

**Recommendation:** WCMRC should continue to utilize and develop the SimCell during exercises, as it creates a more immersive and challenging environment during exercises; however, it must be ensured that the role of SimCell is clearly defined to participants in all exercise documentation and briefings.

**Item:** Field Activities

**Observation:** In order to gain the most possible learnings an ICP deployment, and test and evaluate communications methods between the ICP and the field, WCMRC endeavoured to mobilize field activities in parallel to the ICP exercise; this was intended to simulate initial mobilization of responders to the scene and provide some inputs to the IMT. However, confusion arose on several

occasions between the 'truth' being provided by SimCell, and the field operations, and which was to be taken as reality in the context of the exercise.

**Recommendation:** WCMRC should consider separating the field component out of ICP exercises to another day of the exercise schedule, to ensure a greater focus on evaluating the field activities, and testing the communication links between field and ICP. If field component is to be used in parallel with the ICP in the future, it must be very clearly defined to participants how the inputs are to be used during the exercise, especially when information is also being injected by SimCell.

**Item:** 2-Day ICP Exercise Schedule

**Observation:** In past exercises (for example the 2016 1000 Tonne), WCMRC has successfully split the activities into two separate days, comprising the activation and initial response actions on the first day (leg of the Planning P), and activities in the ICP on the second day (into the Planning Cycle), in order to create a more realistic timetable and prevent the exercise from being rushed. For this exercise, a more limited scope was defined, whereby the day would start with activation, and proceed to the completion of the Planning Meeting; however, it was apparent that more time would have been valuable to run through different processes and meetings, and allow some time for discussion, coaching and learning opportunities.

**Recommendation:** WCMRC should continue to split ICP exercises into two separate days, in order to provide more focus on evaluating and gaining experience during the activation phase, and allow for a more structured approach to the Planning Cycle.

## Improvement Plan

In order to gain maximum value from the recommendations suggested in this review and debrief, an approach must be taken to ensure that improvement can be made both for day-to-day operations, as well as for future responses and exercises.

Debrief items will be tracked on the ICS 233 - Open Action Tracker to ensure that follow ups can be made and reviewed. There will be ongoing meetings with members of WCMRC senior management and assigned personnel in order to periodically review items from past debriefs and recent spills and exercises. RRT has taken on the responsibility to coordinate and facilitate these meetings and follow-ups.

The Open Action Tracker, as well as supporting After Action Reviews, will also be reviewed periodically before and during the planning phase of future exercises in order to leverage opportunities to evaluate improvement based on debrief items and recommendations. It will be the responsibility of the exercise design team to sure ensure that recommendations are acted upon and improvement is seen.