

ORM Process Application 14-7.01-P

INSTRUCT personnel on the application of the Operational Risk Management (ORM) process, as presented in the E-PME Study Guide

***Operational Risk Management Application***

The systematic steps of the Operational Risk Management (ORM) process are applied here for a pseudo operation. This anticipated operation involves:

Transferring personnel or equipment aboard a small boat from the Deck Watch Officer's (DWO) perspective, including the launching and recovery of small boats.



---

***Step 1: Define the Mission/Task***

This event involves transferring 200 pounds of boxed electronic testing gear and one Electronics Technician to another medium endurance cutter at sea.

For this operation, the operational commander has identified the following requirements:

- The transfer of personnel and equipment must occur within the next four hours, with a maximum duration of 30 minutes.

***Step 1: Define the Mission/Task (continued)***

- Due to the proximity to the receiving cutter, the number of personnel, and the amount of equipment involved, using the small boat is the best option.
- Primary tasks, though not all-inclusive, for launching and recovering a small boat are outlined.

**Primary Tasks of Transfer Operation**

1. Muster and brief appropriate deck personnel.
  2. Personnel staff their stations and prepare to lower and recover the small boat.
  3. Deck Watch Officer (DWO) ensures appropriate launch and recovery equipment are energized.
  4. Conning Officer steers a proper launch and recovery course.
    - For launch:
      - ▶ Bring small boat to the rail or lower boat alongside, as appropriate, to load personnel and equipment.
      - ▶ Boat is away; retrieve sea painter, and stow lines.
      - ▶ Cradle small boat and secure for sea.
    - For recovery:
      - ▶ Pass sea painter to small boat as it approaches alongside.
      - ▶ Secure small boat alongside, or engage forward, then aft falls, and bring to the rail to unload personnel or equipment, as appropriate.
      - ▶ Cradle small boat and secure for sea.
  5. Launch and recovery equipment are de-energized.
  6. Deck debrief; ship returns to base course.
-

**Step 2: Identify the Hazards**

Many different hazards could be associated with each operational phase identified in Step 1. A few possible causes for exposure and simple safeguards to limit exposure to these hazards are given here.

Hazard	Cause	Safeguard in Place
Personnel slip, fall, are pinched, or trapped	Wet deck, gear adrift, fatigue, boat overload, high sea state, inadequate training, complacency	Non-skid deck
Lose control of boat in water or on deck with potential for death, serious injury, equipment damage, mission failure	Material casualty, e.g., davit, line, or table failure; hydraulic leak; high sea state; improper procedures; improper positioning	Crew weight-tests cables annually and replaces them as needed
Fire or explosion	Material casualty, hydraulics, boat overload, improperly stowing flammables; improper electrical load	Electrical cut-off switch

**Step 3: Assess the Risk**

Using the SPE model and the rating and descriptions for each risk factor as explained, determine the risk level for each hazard shown in Step 2.

<b>SPE Model</b>
<p><b>Personnel slip, fall, are pinched, or trapped</b>            Severity = 4, Probability = 2, Exposure = 3, Risk = <math>S \times P \times E = 24</math> (possible risk; attention needed)</p>
<p><b>Lose control of boat</b>            Severity = 4, Probability = 2, Exposure = 2, Risk = 16 (slight risk; possibly acceptable)</p>
<p><b>Fires or explosion</b>            Severity = 5, Probability = 1, Exposure = 2, Risk = 10 (slight risk; possibly acceptable)</p>

**Step 4: Identify the Options**

**S**pread out  
**T**ransfer  
**A**void  
**A**cept  
**R**educe

Identify and evaluate risk control options according to their impact on mission and unit goals, using each STAAR technique element for guidance.

**S**pread Out. Risk commonly is spread out by increasing either the exposure distance or the time between exposures.

**T**ransfer. Transferring risk does not change probability or severity, but rather shifts possible losses or costs to another entity.

**A**void. Avoiding risk altogether requires canceling or delaying the job, mission or operation. But this option is rarely exercised due to mission importance. However, it may be possible to avoid specific risks, e.g., avoid risks associated with a night operation by planning the operation for daytime.

**A**cept. Accept risk when the benefits clearly outweigh the costs, but only as much as necessary to accomplish the mission or task.

**R**educe. Risk can be reduced. The overall goal of risk management is to plan missions or to design systems that do not contain hazards. However, the nature of most complex operations and systems makes it impossible or impractical to design them completely hazard-free.

As we analyze hazards, we will identify those requiring resolution. To be effective, risk management strategies must address risk's components: severity, probability, and exposure.

- Using protective devices, engineering controls, and personal protective equipment usually helps control *severity*. Training, situational awareness, attitude change, rest, and stress reduction usually help control *probability*.
- Reducing the number of people involved or the number of events, cycles, or evolutions usually helps control *exposure*.

Risk control options available for the “*Personnel slip, fall, are pinched, or trapped*” hazard are:

- Avoid some risk by delaying transferring the personnel or equipment until conditions are optimal (favorable sea state, daytime versus nighttime, etc.) if possible.
- Reduce the risk by ensuring adequate supervision is available or increasing supervision in suspect areas.
- Reduce risk by ensuring the personnel involved are not overly fatigued from previous or multiple evolutions.
- Reduce risk by ensuring the personnel involved are recently qualified and thoroughly understand their duties and positions.

***Step 4: Identify the Options (continued)***

- Reduce risk by using personal protective equipment and engineering controls effectively to reduce the severity of possible mishaps.
  - Reduce risk by thoroughly inspecting the deck and small boat space to ensure proper housekeeping and eliminate tripping hazards.
  - Hold a dry run, if necessary, to ensure all personnel, especially those recently qualified, thoroughly understand their duties and positions.
- 

***Step 5: Evaluate Risk vs. Gain***

With all the controls in place, the DWO determined the cumulative risk of all the hazards was acceptable.

The gain in this case far outweighed the risk, especially since the unit needing the electronics equipment and technical support would lose mission readiness and effectiveness, and possibly could have to pull into port for repairs if immediate support was not available.

Therefore, a reality check verified the task's objective was still valid.

---

***Step 6: Execute the Decision***

Based on the DWO's ORM analysis, the commanding officer:

- Decides to launch the small boat to conduct the transfer before nightfall
  - Clarifies supervisory roles
  - Communicates all potential risk factors to personnel involved in the evolution during the pre-launch brief
- 

***Step 7: Monitor the Situation***

- The DWO closely monitors the weather and sea state for any significant changes that could affect the small boat launch. The DWO especially considers the material readiness of the small boat-lowering equipment.
- The Executive Officer monitors the boatswain's mates walk through boat deck inspections for thoroughness to ensure tripping hazards are eliminated.
- The crew immediately reports any significant changes in these factors so that the CO can reevaluate the decision to launch.

A post-event debriefing identifies which controls were effective and the command takes measures to implement them in future evolutions.

---