## Scenario 2-C: Chemical incident during shipping channel dredging in Baltic port

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| **Scenario 2-C: Chemical incident during shipping channel dredging in Baltic port** | |
| **Complexity of the scenario: moderate** | |
| **Possible application of the scenario: Topics 4.1, 5.1, 5.2, 5.6 and 6.1** | |
| **Scenario description:** | |
| During the dredging of a shipping channel in a Baltic Port, one of the excavators removed an old barrel from the sea bottom. The barrel was being placed on the edge of the shipping dock with the help of a worker directly handling it. Suddenly, the barrel cracked and a clear, colourless liquid with a faint fruity odour was released. Ten contractor workers, including the handler, and two customs officers collapsed into unconsciousness. The customs officers were with two border force sniffer dogs, which could be seen to have breathing difficulties and convulsions.  Some port’s personnel who were further away and not involved in the incident saw their colleagues collapsing on the ground and make the emergency call.  **The following piece of information should not be shared with the trainees**, but the discussion should lead to figuring this detail out by asking the right questions:  The first responders arrived on the scene were notified, that the probable causative agent is Tabun (a nerve agent).  **Things to consider:**  In this scenario discussion, it should be pointed out that Tabun is a nerve agent. So, all necessary precautions should be executed. The details are explained elsewhere in the Melody training curriculum - 5.7 concerning decontamination, 5.6 concerning PPE and 6.3.1 concerning medical treatment and countermeasures and protection.  In addition to the scenario depicted, the trainer can support the trainees with the following additional information:   1. The wind direction is South-West 2. The wind speed is approximately 26 km/h. 3. In addition to the scene described, at a first look the first responders spot the following: Commercial labels of seed oil on the barrel.   Consider that the worker handling the barrel when it cracked was exposed directly to liquid Tabun that will be fatal quickly.  Concerning the people at the scene, the topic should be discussed with trainees to explain whether, in this scenario, there is the necessity of isolating them or not. Address this question to trainees and wait for their answer.  Keep in mind that for this scenario, the isolation of people will not be necessary, furthermore, after administration of antidote and decontamination, the victims will not pose the risk of secondary contamination, so they can be transported to the nearest medical point of care, where qualified medical assistance will be provided.  In case of animals (in the provided scenario there are two border force sniffer dogs present), they should be managed later, when all activities dealing with people are ended.  In this scenario, both people and animals will probably be unconscious, so the decontamination process of animals, such as shaving or washing, should be executed by dedicated decontamination personnel (if of course he/she will agree to do it). It should be emphasized that this issue depends on this consent as there is no formal regulation concerning animal rescue in situations where this operation can pose a risk to human rescuers. In case of isolation of these animals at the scene – there is no need for it if the decontamination will be executed and the animals are still alive. Animals should be placed in cages and transported to a veterinary clinic for further observation with all necessary precautions taken. If a consensus concerning the animal decontamination is not reached, the animals should be euthanized to prevent suffering.  This scenario is very probable. In fact, there are a lot of current reports concerning remaining barrels from World War 2 containing chemical agents. The trainer should address directly to trainees and asking the questions. The best possible option is that the trainees will answer correctly, and they can back up with arguments their thesis. The role of the trainer is to direct the discussion to the proper answer.  References:  https://emergency.cdc.gov/agent/tabun/basics/facts.asp  https://pubchem.ncbi.nlm.nih.gov/compound/tabun#section=Identification  Ronald De Groot, Gerard A. Van Zoelen, Marianne E. C. Leenders, Antoinette J. H. P. Van Riel, Irma De Vries & Dylan W. De Lange (2021), *Is secondary chemical exposure of hospital personnel of clinical importance?,* Clinical Toxicology, 59:4, 269-278, DOI: 10.1080/15563650.2020.1860216 | |
| **Application: First alarm (Topic 4.1)**  **Target audience: DO, FB, (M)P, AS** | **Learning objective:** To recognize signs of a potential CBRN release and (initiate first) respond(ers).  **Aim:** The dispatch officer interacts with the caller to identify the likelihood of a possible CBRN release and to know which information should be shared with the chain of command. Use of METHANE and Four W’s protocols. |
| Example: |  |
| **Application: Arrival on scene (Topic 5.1)**  **Target audience: FB, (M)P, AS** | **Learning objective:** To recognize how to carry out an on-site risk assessment, zoning of the area, and isolation and registration of victims.  **Aim:** The first responders arrive on scene, perform a risk assessment, talk with the caller, perform a reconnaissance of the incident scene and discuss actions. They apply METHANE, establish zoning, isolate people and pet animals, initiate evacuation, register persons. |
| **Example:** |  |
| **Application: Forensic awareness (topic 5.2)**  **Target audience: FB, (M)P, AS, EMS, GP** | **Learning objective:** To recognize how to carry out your work without forensic disruption of the scene.  **Aim**: The responders discuss the possible forensic value of the materials found on the scene and preserve the evidence. |
| **Example:** |  |
| **Application: medical treatment and triage (topic 5.6)**  **Target audience: FB, (M)P, AS, EMS, GP** | **Learning objective:** To recognize how to apply appropriate medical care towards patients involved in a CBRN incident.  **Aim:**The responders assess the medical conditions of the victims, perform triage on the victims and recommend possible treatment. |
| **Example:** |  |
| **Application: Alarm Protocol (topic 6.1)**  **Target audience: DO** | **Learning objective:** To differentiate a possible CBRN incident (from normal incident) and to carry out appropriate procedures & protocols.  **Aim:** The dispatch officer interacts with the caller and relays necessary information to the responders moving towards the scene. |
| **Example:** |  |