

## **Solution 5: Targeted collection - Post SMI outside USA after an incident or reasonable suspicion using all available means of detection (breath analyzer, saliva/urine samples, hair specimens, environmental & Sewage samples).**

**This service is applicable only to the Operators using the Random test services.**

**For comprehensive details regarding this Solution, please contact ARTION D&A at +30 210 260 1475 or via email at [info@artiondna.com](mailto:info@artiondna.com)**

**View a brief overview here:**

A targeted collection is rather different than a Random on-board test. It is required after an incident or after a reasonable suspicion and it focuses on a certain time. It is the reply on the question “**Did the crew consume drugs or alcohol on this specific short period?**” It may be required at any time both at sea and during the vessel’s stay at port. It is an emergency, and it requires immediate actions, and the operator must exercise Due Diligence, however the nature of a sea venture may provide such obstacles as:

- The distance between the vessel and the shore.
- The availability of equipment, collectors, or laboratories
- The integrity of the collection and the opportunity of a donor to substitute or adulterate the samples.
- The severity of the incident or the environmental conditions.

According to the international guidelines hair is not recommended as a sample in the case of a targeted collection as it cannot focus on the day of the targeted collection. However, the use of hair turned out to be necessary in many cases for a targeted collection especially outside USA waters.

For example, we had cases where the incident occurred in the middle of the ocean and no collector could board the vessels whereas the operators had no trustworthy means to verify that the involved crew members had donated breath, saliva, urine samples for themselves or another crew member donated instead of them.

The complexity of an incident has led us to approach a targeted collection through the concept of the Incident Investigation and /or the Risk Assessment. A targeted collection for us is a part of the mitigating actions of a Risk Assessment or the contributing factors to an Incident Investigation aiming to present the Operator exercising Due Diligence.

Consequently, our duty is to assist the Operator to utilize all available tools on board and D&A testing techniques to effectively cover all requirements derived of the SMS of the company.

In case of a targeted collection, after an incident or a reasonable suspicion, we cooperate with the operator to utilize all available tools on board to help them successfully complete the Incident investigation. Subject to the conditions of the incident, we may ask the operator to provide us with:

- Breathalyzer readings (Immediately after the incident). The breath analyzer is always available on board, but it provides results for a narrow detection period. Furthermore, the donation is not directly monitored by the Operator, which provides opportunities for adulteration.
- Saliva or Urine samples with or without collectors (few hours after the incident). Subject to the conditions, we can offer a collection in the presence of a collector or without.

The analysis of the urine test provides results for a wider detection period of 2-3 days but according to the instructions, the donation is not directly monitored by a collector that provides opportunities for adulteration.

- Environmental samples can be collected for an indirect observation of Drugs or Alcohol possession on board the accommodation spaces.
- Hair samples (at least 7 days after the incident), which we test if a crew member has donated for himself. Although the hair testing is not preferred in case of a targeted collection, it provides results for the last 90 days and the sampling kits are always available on board. Furthermore, the test can be initiated anytime without the physical presence of a collector because Artion D&A tests the samples to make sure that each crew member has donated only for themselves and verifies the collection time to avoid any undesired manipulation of the test.

The combination of the four methods eliminates the disadvantages of each method separately. By combining the data of all available measurements, we provide the operator with a result that presents him exercising Due Diligence as is required in such a case, **because he has used all available means**.

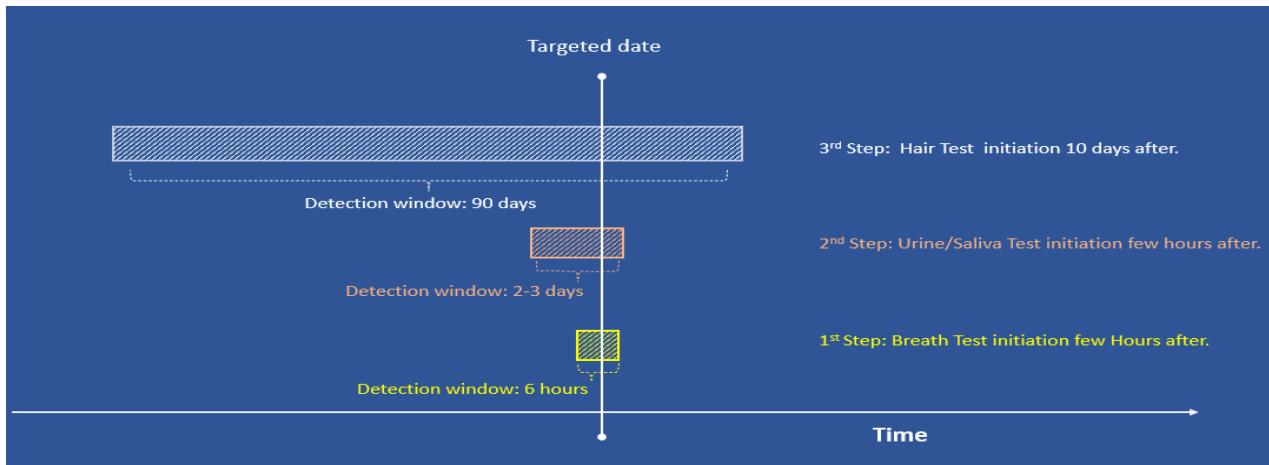
The picture below presents the process into steps.

**Step 1:** Immediately after the incident (within the targeted date) the vessel performs Alcohol test by using breath Analyzer (Marked on the picture with red fonts). The detection window of the few hours covers the time of the incident.

The repetition of this step may be decided to minimize the risk of Alcohol consumption until the issuance of the results of the step 3.

**Step 2:** A few hours after the incident the vessel collects saliva or urine specimens with or without a collector subject to the distance of the vessel with the coast (Marked on the picture with brown fonts). The detection window of the 2-3 days covers the time of the incident.

**Step 3:** At least 7 days after the incident the vessel collects hair specimens for analysis (Marked on the picture with blue fonts). The detection period of 90 days covers the time of the incident and a long period before the incident while it overlaps the results of the step 1 & 2. Given the testing of the hair samples against tampering of the specimens, if the results of the 3 steps agree, it means that all crew members donated for themselves breath, urine or saliva and hair specimens. The final report is issued based on the hair analysis, taking into consideration all other results.



**For the reason explained above the Operator must inform Artion D&A in the case of a targeted collection (consumption suspicion or incident) to make sure that the date and the purpose of the targeted collection is covered through the donated samples.**

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