

## Annex B21: Hazmat Evaluation Guide

Strategic Considerations
<p>Medium and Heavy international USAR Teams need to possess the inherent knowledge to recognise a hazardous environment, thus minimising the risk of harm, injury or death to its members, the affected population and the environment. It is also expected that teams will be able to communicate its findings regarding contamination to others. As indicated, an international USAR Team should:</p>
<ul style="list-style-type: none"> <li>• Have the ability to recognise situations where contaminant(s) may be suspected.</li> </ul>
<ul style="list-style-type: none"> <li>• Possess the technical expertise to offer sound advice to the LEMA, UCC and other actors.</li> </ul>
<ul style="list-style-type: none"> <li>• Possess the capability to provide basic protection for team members by performing environmental detection and monitoring.</li> </ul>
<ul style="list-style-type: none"> <li>• Implement basic decontamination procedures.</li> </ul>
<ul style="list-style-type: none"> <li>• Be aware of the team's limitations in dealing with complex hazmat operations.</li> </ul>
Operational Considerations
<p>If a determination is made that a site is contaminated or if a site is suspected to be contaminated, no USAR operations should be conducted until an appropriate assessment has been undertaken. If it is within the capability of the team, the source of the contamination should be isolated. If it is beyond the capability of the team to isolate the source of contamination, the area should be cordoned off, marked accordingly, with the UCC being notified immediately.</p>
<p>Generally, the following tactics should be adopted while assessing a site that is suspected to be contaminated:</p>
<ul style="list-style-type: none"> <li>• Ensure a safe approach – always upwind and up-slope.</li> </ul>
<ul style="list-style-type: none"> <li>• Ensure clear command and control arrangements are in place and well understood by all present.</li> </ul>
<ul style="list-style-type: none"> <li>• Secure the site as best as possible to ensure the safety of others.</li> </ul>
<ul style="list-style-type: none"> <li>• Attempt to identify the contaminant (UN Numbers, Dangerous Goods or Hazchem Codes).</li> </ul>
<ul style="list-style-type: none"> <li>• Assess the potential harm and minimise, where possible, environmental contamination.</li> </ul>
<ul style="list-style-type: none"> <li>• Call in assistance – expert advice/additional resources, if possible.</li> </ul>
<ul style="list-style-type: none"> <li>• If within the teams' capability – render safe.</li> </ul>
<ul style="list-style-type: none"> <li>• Always assume the worst until proven otherwise.</li> </ul>
<ul style="list-style-type: none"> <li>• Decontamination can be both equipment and labour intensive, therefore consideration should be given to avoiding overextending the teams' capability in this area.</li> </ul>

<ul style="list-style-type: none"> <li>Whenever protective clothing or equipment is used, decontamination strategies need to be considered</li> </ul>
<b>Decision Process Considerations</b>
Prior to committing resources to a contaminated site, the following should be considered:
<ul style="list-style-type: none"> <li>A risk analysis should be conducted based upon hazard/risk assessment and the site survey.</li> </ul>
<ul style="list-style-type: none"> <li>Teams should evaluate the risk in relation to the rescue of viable victims versus recovery of the dead.</li> </ul>
<ul style="list-style-type: none"> <li>Teams should also consider other search and rescue priorities within the immediate vicinity.</li> </ul>
<b>Operational Considerations at Worksites</b>
While undertaking search and rescue operations at any worksite teams should consider the following issues and implement a monitoring regime for the duration of the operations:
<ul style="list-style-type: none"> <li>Oxygen levels.</li> </ul>
<ul style="list-style-type: none"> <li>Flammability of substance or surrounding atmosphere.</li> </ul>
<ul style="list-style-type: none"> <li>Toxicity levels.</li> </ul>
<ul style="list-style-type: none"> <li>Explosive limits.</li> </ul>
<ul style="list-style-type: none"> <li>Radiological emissions and monitoring.</li> </ul>
<b>Other Considerations</b>
The following considerations may also affect the decision on whether to conduct search and rescue operations:
<ul style="list-style-type: none"> <li>Condition of voids – if the hazard can be easily isolated or mitigated and this is carried out, the situation is considered handled and operations are to continue.</li> </ul>
<ul style="list-style-type: none"> <li>Time required to access victims – this will be an estimate of the time required to get to the first victim. It should include the time it would take to mitigate hazards, cut through floors, walls, roofs, etc., and to shore and brace the access route as well as relevant adjacent structures if required.</li> </ul>
<ul style="list-style-type: none"> <li>Special occupancy information – increased attention and monitoring will be given to certain types of target hazards, especially those involving nuclear energy, radiological elements, specialised military facilities, chemical manufacture, and biological production or storage.</li> </ul>
<ul style="list-style-type: none"> <li>Decontamination – careful planning is needed to ensure the team has procedures in place that provides adequate decontamination of members including search dogs.</li> </ul>
Go or No-go conditions – and subsequent risk assessments:

<ul style="list-style-type: none"> <li>• Time required to complete the assignment.</li> </ul>
<ul style="list-style-type: none"> <li>• Protection and limitations of available personal protective equipment.</li> </ul>
<ul style="list-style-type: none"> <li>• Results of the risk-benefit analysis.</li> </ul>
<ul style="list-style-type: none"> <li>• Resource status.</li> </ul>
<ul style="list-style-type: none"> <li>• Security and safety considerations.</li> </ul>
<b>Detection and Monitoring</b>
<p>The following should be considered when undertaking detection and monitoring:</p>
<ul style="list-style-type: none"> <li>• Detection and monitoring is required of both the Operational Worksites and BoO.</li> </ul>
<p>Operational Worksite detection and monitoring should be performed by the assigned hazmat specialist in the team and include the following:</p>
<ul style="list-style-type: none"> <li>• Establishing safe perimeters of each assigned structure.</li> </ul>
<ul style="list-style-type: none"> <li>• Establishing clean entry points of each assigned structure.</li> </ul>
<ul style="list-style-type: none"> <li>• Plan for the need to monitor additional voids or potential spaces encountered during operations.</li> </ul>
<ul style="list-style-type: none"> <li>• Establishing decontamination-sites – including the appropriate disposal of contaminated run-off.</li> </ul>
<ul style="list-style-type: none"> <li>• Ensuring decontamination of assigned tools and equipment, including protective clothing.</li> </ul>
<ul style="list-style-type: none"> <li>• Ensuring decontamination of assigned transportation vehicles.</li> </ul>