

Statement of Requirements

Executive Summary

1. The Chemical Protection and Detection Group (CPD) within Chemical, Biological and Radiological (CBR) Division of Dstl exists to ensure that MoD (and other UK Government Departments) have access to timely and impartial advice on all matters relating to the design, performance, integration and use of protective clothing, respiratory protection and collective protection equipment. Protection against tracers (such as fluorescein) in order to establish the protection level of Personal Protective Equipment (PPE). The maximum of 500g of fluorescein per day will be used.

Introduction

2. The Authority requires a call-off contract with one supplier in order to facilitate wind tunnel testing from 8th September 2023 to 31st December 2027. This call off contract will be open for all Dstl Groups who have a similar requirement utilising the chemicals mentioned below. No aerodynamic testing will be required under this contract.

Requirements

3. Mandatory/essential requirements The Authority has the requirement to test PPE clothing within a wind tunnel. To do this the Authority shall aerosolise up to 100 litres of an aqueous solution containing 2g I-1 fluorescein per day.
4. The wind tunnel shall:
 - a. Be at least 2 meters high
 - b. Be at least 2.5 meters wide (to enable safe working within the tunnel)..
 - c. Have a maximum volume of 250m³ *
 - d. Minimum useable floor length of at least 10 meters. • Have laminar airflow with the capability to induce turbulent airflow if required
 - e. Be able to be booked for uninterrupted 1 week periods, as well as multiple weeks
 - f. Be suitable for the spraying of fluorescent tracers, e.g. fluorescein at a concentration of up to 100g I-1
 - g. A compressed air supply of at least 6 bar shall be available
 - h. Have access points for power, data and other cables during dissemination
 - i. Floor space of 5x5 meters should be located by the wind tunnel and near the power/data access ports to allow the operation of ancillary equipment
 - j. Have a minimum operating speed of 1.0m s⁻¹ .
 - k. Have the wind tunnel operate at a range of wind speeds, up to and including 10m s⁻¹ (the ability to have a wind speed of 2.0m s⁻¹ and 5.0m s⁻¹ are essential).

5. The Contractor shall:

- a. make the wind tunnel available to staff from DSTL, together with an operator and expertise in its use for a 5 day period.,
- b. support DSTL staff in setting up aerosol generators and other equipment in the wind tunnel,
- c. perform fluorometric analysis of samples
- d. arrange disposal of waste liquid from Wind tunnel,
- e. other tasks as detailed an agreed on the relevant tasking Forms