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**U.S. Army Combat Capabilities Development Command
Chemical Biological Center
8198 Blackhawk Road
APG, MD 21010-5424**

**TEST REPORT FOR PROTECTION FACTOR TESTING OF BULLARD 88VX & GVX
RESPIRATORY PRODUCTS**

Lab No. 13735

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PREFACE

This test report for Protection Factor testing of Bullard respiratory products is property of E.D. Bullard Co. in accordance with Technology Support Agreement (TSA) Project No. 2407T. Testing was conducted for E.D. Bullard Co. in accordance with the “Test Plan for Protection Factor Testing of Bullard 88VX and GVX Respiratory Products”, July 10, 2024.

The use of either trade or manufacturers' names in this report does not constitute an official endorsement of any commercial products. This report may not be cited for purposes of advertisement.

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This report has not been approved for public release.

Executive Summary

The work described in this report was authorized under Technology Support Agreement (TSA) 2407T, between the US Army Combat Capabilities Development Command Chemical Biological Center (DEVCOM CBC) and E.D. Bullard Company (Bullard). The purpose of this test was to evaluate the ability of the Bullard 88VX and the GVX helmet combined with 17 different breathing air flow control devices to protect the wearer from aerosolized chemical and airborne industrial hazards.

The Protection Factor (PF) test used 12 different human test participants. The equipment was donned by the test participant with assistance from DEVCOM CBC and Bullard personnel. Test participants entered a chamber filled with a simulant aerosol and performed nine one-minute exercises designed to stress the seal of the equipment. Air was sampled from the oral/nasal region inside the helmet throughout the test. The results of the test are given as a PF, defined as the ratio of the concentration of the challenge aerosol outside the hood to the concentration of the challenge aerosol inside the hood.

Two data points were collected for each of the 34 helmet and flow control configurations for a total of 68 data points. Each of the configurations tested met the passing requirement specified by Bullard of 88% passing higher than 50,000 PF and 100% passing higher than 10,000 PF.