Special Hazards Systems
Level III Content Outline

(Updated Exam Released November 2, 2026)

Engineering Technician

The candidates for NICET certification at Level III in Special Hazards Systems should have the knowledge, experience, and skills needed to work in the industry. They design gaseous, dry, and wet agent systems, including detection and control. They prepare submittals, estimates, and project reports. They manage special hazards projects (including supervising personnel and contractors) that require them to inspect, maintain, repair, install, and test complex* systems. Level III technicians have at least 5 years of experience in special hazards systems.

**Complex systems may include, but are not limited to, one or more of the following: suppression systems, networked control units, emergency control interfaces, high expansion foams, medium expansion foams, very early warning smoke detection systems, low pressure CO_2, selector valve-controlled systems, explosion prevention, and explosion venting, water mist, foam pump system, hybrid (water and inert gas) fire-extinguishing systems, preaction, and deluge systems.*

3.1 Inspection, Testing, and Maintenance

(Questions related to these tasks make up 1-10% of the exam.)

3.1.1 Conduct a low-pressure CO_2 partial flow test. [2]
3.1.2 Conduct foam bladder integrity tests. [1,10]
3.1.3 Perform foam proportioning accuracy testing including standard and alternative methods. [1]

3.2 Repair and Recharge

(Questions related to these tasks make up 5-15% of the exam.)

3.2.1 Replace control unit components. [3]
3.2.2 Re-load the original programming configuration to a control unit after a repair. [3, 5]
3.2.3 Conduct a discharge investigation. [3, 5]
3.2.4 Identify the elements needed for a safe agent recovery and recharge station (CO_2 and clean agents). [2, 5,11]

3.3 Installation

(Questions related to these tasks make up 5-15% of the exam.)

3.3.1 Perform complex programming for multi-zone, multi-hazard, networked systems with directional valves, soak systems, or remote access over internet. [1, 2, 3]
3.3.2 Conduct agent discharge and concentration final acceptance tests. [2, 5]

3.4 System Design

(Questions related to these tasks make up 25-35% of the exam.)

3.4.1 Determine an appropriate system type and agent for the site's hazard(s). [1, 2, 5, 8, 9]
3.4.2 Develop a programming matrix for a special hazards system. [1, 3, 5]
3.4.3 Use software to calculate system flow for gaseous agents (including high-pressure CO_2). [1, 2, 5]
3.4.4 Use software to hydraulically calculate low-expansion foam water systems. [1]
3.4.5 Navigate product listing and/or approvals to finalize foam system design criteria. [1]

3.5 System Configuration

(Questions related to these tasks make up 21-31% of the exam.)

3.5.1 Select and layout detection devices. [3]
3.5.2 Select and layout power supply devices. [3, 12]
3.5.3 Select and layout cables, conduit, and raceways. [1, 12]
3.5.4 Select and layout piping and discharge nozzles. [1, 2, 5]
3.5.5 Select and layout actuating/releasing devices. [2, 5, 8]

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3.5.6 Select and layout agent storage equipment. [1, 2, 5, 9]
3.5.7 Layout and calculate air sampling systems. [3, 4]
3.5.8 Select and layout notification appliances. [3]
3.5.9 Select and layout manual activation systems. [5]

3.6 Work Management

(Questions related to these tasks make up 9-19% of the exam.)

3.6.1 Procure materials for a special hazards system installation. [2, 3, 5]
3.6.2 Prepare project documentation. [5, 6]
3.6.3 Plan acceptance testing and prepare associated documentation. [6, 7]
3.6.4 Evaluate final acceptance test results. [2, 5]
3.6.5 Develop, coordinate, and monitor a project schedule. [6, 7]
3.6.6 Prepare maintenance plans. [2, 3, 5]
3.6.7 Conduct end-user training. [3, 5]

3.7 Safety

(Questions related to these tasks make up 1-10% of the exam.)

3.7.1 Prepare and implement project-specific safety plans based on site conditions. [2, 3, 13]
3.7.2 Maintain SDS Binder. [4, 13, 14]

August 31, 2026 Footnote number is linked to a reference on the General References listing

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