The Hong Kong University of Science and Technology (Guangzhou)
Special Emergency Response Plan for Laboratory Safety Accidents

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1	V1	--	Initial Release	10-01-2026

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Chapter I General Provisions

Article 1 In order to implement the safety work policy of "Safety First, Prevention Oriented, Comprehensive Management," further standardize and clarify the emergency rescue procedures for campus laboratory safety accidents, carry out emergency rescue in a forceful, orderly, and effective manner, minimize property losses and casualties caused by laboratory safety accidents, and maintain campus safety and stability, this emergency plan is hereby formulated in accordance with the requirements of the Work Safety Law of the People's Republic of China, the Emergency Response Law of the People's Republic of China, the Laboratory Safety Regulations for Higher Education Institutions, and the Guidelines for the Preparation of Production Safety Accident Emergency Plans for Production and Business Units, and considering the actual circumstances of the University. The deaths, lost workday accidents (serious injuries, minor injuries), restricted workday accidents, medical treatment accidents, first-aid incidents, near-miss incidents, and environmental accidents referred to in this emergency plan are classified in accordance with the Interim Measures for the Reporting and Investigation of Laboratory Safety Accidents.

Article 2 Working Principles

People First, Safety First. Safeguarding personal safety and health shall be the primary task. At the accident scene, saving lives shall

take precedence, with controlling the spread of the disaster as the key focus, to minimize the losses caused by the accident to the greatest extent.

Unified Leadership, Centralized Command. When an accident occurs, all units must adhere to the unified leadership of the emergency command headquarters, actively cooperate according to their respective responsibilities, and pool collective wisdom and efforts to ensure the coordinated and orderly execution of emergency response work.

Compliance with the Plan, Decisive Response. All participating forces at the rescue scene shall act in unison under the division of tasks stipulated in the plan, cooperate closely, seize favorable opportunities based on the different types of accidents, make decisive decisions, act swiftly, and effectively control the development of the situation.

Chapter II Scope of Application

Article 3 Accident Categories

Fires, explosions, personal injuries (electric shock, mechanical injury, thermal burns and cold burns, etc.), hazardous substance leakage (chemical leakage, radioactive substance leakage, biological leakage), water immersion, etc., occurring during scientific research or teaching. This emergency plan does not apply to emergency response for special equipment accidents; the

emergency response for special equipment accidents shall be carried out in accordance with the University's Emergency Plan for Special Equipment Accidents. Possible accident scenarios:

During teaching or scientific research, if operation or storage is improper, or if usage and storage facilities are abnormal, certain chemical reagents, gases, biological reagents, and radioactive substances may leak and come into contact with personnel, causing personal injury, or be released into the environment. For example, leaked substances may be discharged into the sewer system, or directly leak into soil or surface water, or be released into the atmosphere, causing impacts.

Radiation devices are commonly used in teaching and scientific research. When the safety interlock of the radiation device loading door malfunctions, the shielding is damaged, or the personal dose alarm sounds during normal operation, there is a possibility of accidental radiation release, affecting personnel health. Improper use or storage may also lead to leakage of radioactive isotopes, affecting personnel or the environment.

During teaching or scientific research, if instruments, equipment, switches, sockets, etc., leak electricity, or if wiring ages, short-circuits, or is overloaded, or if improper operations are performed during electrical testing, the human body may suffer electric shock. When electric shock occurs, the human body directly contacts the power source, and current passes through the body,

causing tissue damage and dysfunction or even death. The longer the electric shock lasts, the more severe the bodily injury.

Laboratories also involve various types of mechanical devices (such as centrifuges, stirrers, grinders, high-pressure equipment, hydraulic devices, microtomes, mechanical lifting platforms, etc.). The unique nature of their operating environments (compact space, multi-equipment coordination, high personnel mobility) makes the risk of mechanical injury hidden, diverse, and sudden.

Scalds and frostbite are also common accidental injuries in laboratories, with their severity directly related to the temperature of the injury source and the duration of contact. Scalds are mostly caused by high-temperature liquids (such as boiling water, hot oil), steam, or flames, while frostbite results from tissue freezing injury caused by low-temperature environments (such as liquid nitrogen or dry ice operations).

Article 4 Severity and Scope of Impact

The severity and scope of impact of fires and explosions are classified in accordance with the severity and scope of impact of fires as stipulated in the Special Emergency Plan for Fire Incidents of The Hong Kong University of Science and Technology (Guangzhou).

The severity and scope of impact of personal injury and hazardous substance leakage are classified in accordance with the nature of laboratory safety accidents as stipulated in the Interim

Measures for the Reporting and Investigation of Laboratory Safety Accidents.

Chapter III Emergency Organization Structure and Responsibilities

Article 5 University-Level Emergency Command Headquarters

The University establishes a Campus Emergency Command Headquarters, serves as the command organization for university safety accidents. It is responsible for coordinating the forces and resources of relevant functional departments and units, and organizing emergency responses.

Article 6 Laboratory Safety Emergency Command Center

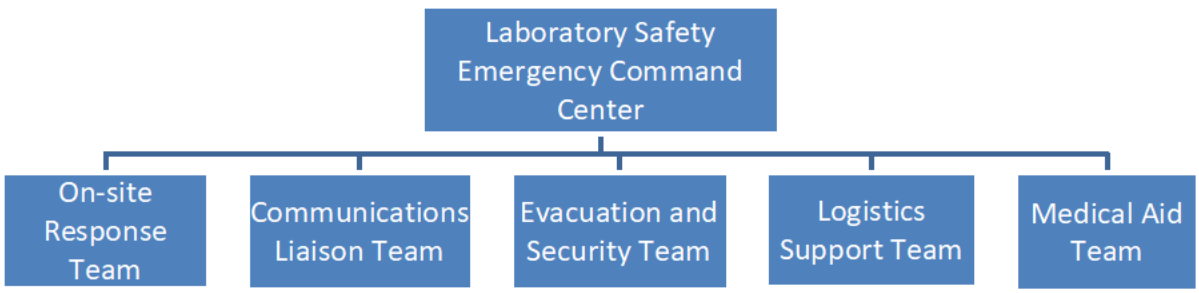
The Campus Emergency Command Center has established a Laboratory Safety Emergency Command Center, headed by the university leader in charge of laboratory safety. The heads of the Office of Laboratory Facilities and Safety and the Laboratory Health and Safety Department serve as deputy heads. Members include the heads of the Laboratory Services Department, the Campus Security Department, the Campus Facilities Management Department, the Campus Space and Services Management Department, the Information Technology and Data Intelligence Department, the Laboratory Management Department, and other relevant departments. The Laboratory Safety Emergency Command Center is responsible for the overall

coordination and deployment of emergency responses to sudden safety incidents in the university's laboratories. When the head is not on site, a deputy head may assume on-site command and coordination of the incident. The primary responsibilities are as follows:

- Direct and coordinate the work of all emergency response teams to quickly secure the accident site and launch rescue operations;
- Promptly and accurately report the situation at the accident site and the progress of rescue operations to the Emergency Command Center;
- Cooperate with and assist local fire and rescue departments, public security authorities, and higher-level agencies in carrying out emergency rescue, accident investigations, follow-up measures, and other related tasks

Article 7 Laboratory Safety Emergency Command Center

The Laboratory Safety Emergency Command Center governs five emergency response teams, including the On-Site Response Team, the Communications Liaison Team, the Evacuation and Security Team, the Logistics Support Team, and the Medical aid



Team, to swiftly carry out on-site response, communications liaison, evacuation guidance, safety blockading, emergency rescue, and logistics support as needed.

1. On-Site Response Team

Lead Unit: Laboratory Health and Safety Department, Campus Security Department

Members: Laboratory Services Department, Campus Facilities Management Department, the affected unit, and other relevant departments

Main Responsibilities: Responsible for formulating specific emergency rescue and on-site response plans, following the instructions of the Leader/Deputy Leader of the Laboratory Safety Emergency Command Center, and carrying out on-site emergency rescue; urgently dispatching specialized equipment and other materials required for emergency rescue.

2. Communications Liaison Team

Lead Unit: Laboratory Health and Safety Department

Members: The affected unit and other relevant departments

Main Responsibilities: Responsible for communication coordination at the emergency rescue scene, ensuring smooth information flow at the rescue site, promptly reporting the response work of each team to the Leader/Deputy Leader of the Laboratory Safety Emergency Command Center, conveying the Leader's/Deputy Leader's instructions to each team at the accident

scene, promptly reporting the progress of on-site emergency rescue, and coordinating with relevant departments under the unified arrangement of the Laboratory Safety Emergency Command Center Leader to draft information briefings, reporting accident information to the University and higher-level authorities in a timely, accurate, and comprehensive manner, monitoring accident public opinion, and releasing information externally.

3. Evacuation and Security Team

Lead Unit: Campus Security and Protection Department

Members: The affected unit

Main Responsibilities: Responsible for the emergency evacuation of personnel in affected areas on campus, guiding personnel in evacuation and self-rescue, arranging dedicated personnel to stand guard and guide at safety exits and locations prone to misdirection, inspecting the accident site and adjacent floors, areas, and rooms, verifying and searching for personnel who have not been evacuated in time, ensuring all faculty, staff, and students are fully evacuated and assembled, and cordoning off the accident scene to prevent unauthorized personnel from entering.

4. Logistics Support Team

Lead Department: Campus Facilities Management Department, Laboratory Services Department

Members: Other relevant departments

Main Responsibilities: Cooperate with on-site rescue requirements, ensure the normal operation of fire-fighting water supply, electricity, and fire-fighting facilities and equipment, promptly monitor the operational status of water, electricity, gas, and heating at the scene, implement partial power outages, gas shutoffs, and other measures as necessary, and be responsible for the proper accommodation of affected personnel.

5. Medical Aid Team

Lead Department: University Clinic

Members: The affected unit and other relevant departments

Main Responsibilities: Provide emergency medical care to the injured, coordinate with relevant medical institutions to implement emergency medical aid for the injured, and provide comfort and psychological intervention for the injured.

When a laboratory safety accident occurs, before the Laboratory Safety Emergency Command Center members arrive, the on-site responsible personnel of the affected unit shall assume temporary on-site emergency command, seal off the accident scene, and fully utilize the available resources of the affected unit to carry out initial emergency rescue work. After the Laboratory Safety Emergency Command Center members arrive at the accident scene, the relevant accident information shall be promptly provided to the Laboratory Safety Emergency Command Center,

and each emergency response team shall be organized to carry out emergency rescue.

Chapter IV Response Activation

Article 8 Emergency Preparedness

- The Campus Fire Control Center (Main Fire Control Room) is staffed by two person on duty 24 hours a day; the Campus Volunteer Fire Brigade is on standby 24 hours a day.
- Depending on the time, location, scale, nature, and impact of the laboratory safety accident, the Leader/Deputy Leader of the Laboratory Safety Emergency Command Center may, as required by the work, urgently notify and summon relevant personnel from each specialized team to rush to the scene to participate in emergency rescue.
- All relevant units participating in the accident emergency response shall ensure personal safety and maintain uninterrupted communication at all times.

Article 9 Reporting

1. In the event of a laboratory safety accident, on-site personnel shall immediately call 88330110 to report to the University Fire Control Center, and shall also report to their immediate supervisor, with the report escalating level by level to the head of the affected unit.

2. After receiving the alarm, the Fire Control Center shall report to the relevant departments according to the type of accident. Specifically, fire alarms shall be reported to the Campus Security and Protection Department; hazardous substance leakage shall be reported to the Laboratory Health and Safety Department; water, electricity, gas, and other infrastructure issues shall be reported to the Laboratory Services Department/Campus Facilities Management Department; if personal injury is involved, the University Clinic may be contacted. If the situation is complex, each alarm-receiving department shall further report to the Leader/Deputy Leader of the Laboratory Safety Emergency Command Center for further instructions.

3. The content of the accident report includes: an overview of the unit where the accident occurred; the time, location, and site conditions of the accident; a brief description of the accident sequence; the number of casualties already caused or likely to be caused (including the number of missing person) and the preliminary estimate of property damage; measures already taken; and other information that should be reported.

4. After each department receives the alarm, the relevant person responsible shall immediately organize personnel to rush to the scene to carry out emergency response.

Article 10 Basic Response

1. After a laboratory safety accident occurs, on-site personnel of the affected unit shall organize and guide evacuation in accordance with this emergency plan, rescue person in distress while ensuring their own safety, and carry out or assist in emergency rescue.

2. After receiving the alarm, the Fire Control Center shall immediately organize personnel to go to the scene to verify the alarm, simultaneously retrieve surveillance footage of the incident location, and notify the relevant departments. The relevant departments shall immediately arrange for the person responsible to rush to the scene to carry out emergency rescue work.

3. Principles of emergency rescue: save people first, then fight the disaster; control first, then eliminate; prioritize the critical, then the general.

Article 11 Tiered Response

1. Level 1 Response

Level 1 Response refers to laboratory safety accidents of a similar serious nature, such as those involving fatalities, serious injuries, major environmental accidents, or Level 1 and Level 2 fire incidents. The response shall be carried out in accordance with the Comprehensive Emergency Plan for Emergencies of The Hong Kong University of Science and Technology (Guangzhou)

and the Special Emergency Plan for Fire Incidents of The Hong Kong University of Science and Technology (Guangzhou).

2. Level 2 Response

Level 2 Response refers to laboratory safety accidents of a similar nature, such as those involving minor injuries, relatively major environmental accidents, or Level 3 fire incidents.

After an accident occurs, personnel receiving the alarm from each department shall report to the department head, concurrently arrange for personnel to proceed to the scene for emergency response, and shall report to the Leader/Deputy Leader of the Laboratory Safety Emergency Command Center based on the actual situation, announce the activation of the Special Emergency Response Plan for Laboratory Safety Accidents, and organize the members of the members to coordinate the response. If the circumstances of the emergency change, the level of emergency response shall be promptly adjusted according to the nature and development trend of the incident.

3. Level 3 Response

Refers to restricted workday accidents, medical treatment accidents, and minor environmental accidents.

After an accident occurs, the relevant emergency response team or the responsible personnel of the local laboratory shall handle it in accordance with the corresponding on-site Response plan. If the circumstances of the emergency change, the level of

emergency response shall be promptly adjusted according to the nature and development trend of the incident.

Article 12 Termination of Response

1. The basic conditions for terminating the emergency response include: the on-site emergency situation has been brought under effective control, and safety risks have been eliminated or controlled within an acceptable range; the emergency response tasks have been completed; emergency resources have been fully utilized or are no longer needed; and the necessary information collection, evaluation, and reporting have been completed during the emergency response period.

2. Among these, Level 1 Response shall be declared terminated by the Emergency Command Headquarters after obtaining approval from the higher-level competent government department; Level 2 Response shall be declared terminated by the Leader/Deputy Leader of the Laboratory Safety Emergency Command Center or the relevant emergency response team; Level 3 Response shall be declared terminated by the relevant emergency response team or the responsible personnel of the local laboratory.

Chapter V Response Measures

Article 13 On-site response plans for laboratory safety accidents shall be implemented with reference to the corresponding appendices according to the different accident categories.

Chapter VI Emergency Support

Article 14 Communication and Information Support

1. Video surveillance systems are installed in all key areas of the University.

2. The University's buildings are equipped with smoke detectors, heat detectors, and fire broadcast systems.

3. Emergency rescue personnel communicate via walkie-talkies and mobile phones. The telephones of the University Fire Safety Emergency Command Center and members of each working team must remain switched on 24 hours a day. Any changes to telephone numbers must be promptly updated with the Fire Control Center.

4. The Fire Control Center shall periodically update the contact information of the Fire Safety Emergency Command Center, each working team, and emergency response teams to ensure unimpeded communication for all departments, units, and individuals participating in emergency work during emergencies.

Article 15 Personnel Support

1. Emergency team support is established based on the nature and characteristics of the accident and the actual needs of the emergency rescue work. Functional emergency rescue teams shall be formed according to the principles of professional matching, ease of leadership, ease of assembly, and ease of carrying out rescue. Personnel shall be assigned and appropriately adjusted based on changes in actual circumstances.

2. To ensure the smooth implementation of rescue work and the effective operation of the rescue organization, when personnel leave the organization, new personnel shall be promptly supplemented and trained. Each working team shall strengthen the construction and training of on-site rescue teams to ensure they can fulfill their corresponding responsibilities during the emergency rescue process. A joint coordination mechanism shall be established, enlisting various social rescue forces such as those from nearby units to participate in emergency rescue work.

Article 16 Material and Equipment Support

Emergency materials and equipment, based on the emergency rescue needs of this emergency plan, shall establish a sound emergency material supply guarantee system with the University as the main body and supplemented by social rescue materials. Specifically, emergency material rooms are located on individual

floors on the east and west sides of the University's core area, equipped with laboratory emergency-related materials; relevant emergency materials are also configured in some medium- and high-risk laboratories. Each department and laboratory is responsible for the management of its own emergency material reserves, carrying out inspection, maintenance, and upkeep of emergency materials. Expired or used emergency materials shall be promptly replenished and replaced.

Article 17 Publicity, Education, Training, and Drill Support

1. The Laboratory Safety Emergency Command Center and relevant functional departments shall make full use of campus broadcasts, the campus website, publicity windows, and new media such as Weibo and WeChat to organize and carry out publicity on emergency laws and regulations and emergency knowledge including prevention, risk avoidance, self-rescue, and self-protection. Safety education shall be vigorously promoted in the classroom to enhance the safety awareness and basic emergency skills of faculty, staff, and students, so as to meet the needs of emergency response.

2. The training of emergency response teams is the responsibility of the Laboratory Health and Safety Department, the Campus Security Department, the University Clinic, and other departments. Regular and ad hoc emergency

business training shall be conducted as needed to enhance the overall combat effectiveness of the emergency response teams.

3. The Laboratory Safety Emergency Command Center shall, as needed, periodically organize emergency response teams to conduct emergency rescue drills. Emergency drills include three phases: preparation, implementation, and summarization. Through emergency drills, the emergency teams shall be trained, the post responsibility system implemented, and the emergency command mechanism, decision-making, coordination, and response procedures made familiar; resource needs shall be identified, the emergency state evaluated, and the emergency plan tested and improved.

Chapter VII Supplementary Provisions

Article 18 This emergency plan is formulated and interpreted by the Laboratory Health and Safety Department. All University departments shall comply with and implement it, and shall formulate and revise their own departmental emergency plans with reference to this plan.

Article 19 The Laboratory Health and Safety Department shall revise this emergency plan as needed based on the formulation, amendment, and improvement of relevant laws and regulations,

organizational adjustments, and issues and new circumstances discovered during implementation.

Article 20 This emergency plan shall take effect on the date of its issuance.

Appendices

Appendix 1 On-Site Response Plan for Laboratory Chemical Spills

Appendix 2 On-Site Response Plan for Laboratory Gas Leakage

Appendix 3 On-Site Response Plan for Laboratory Radiation Incidents

Appendix 4 On-Site Response Plan for Laboratory Biological Incidents

Appendix 5 On-Site Response Plan for Laboratory Electric Shock Accidents

Appendix 6 On-Site Response Plan for Laboratory Mechanical Injury

Appendix 7 On-Site Response Plan for Laboratory Scalds and Frostbite

Appendix 8 On-Site Response Plan for Laboratory Fire Accidents

Appendix 9 On-Site Response Plan for Laboratory Water Spills