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Gangdong Technion Isreal Institute Technology

Laboratory emergency response plan

Compilation unit：Gangdong Technion Isreal Institute Technology

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LIST

1 General

1.1 Purpose of preparation

In order to reasonably adopt preventive measures, prevent the campus (six scientific laboratories of Guangdong Institute of Technology, Guangdong University, No. 241, University Road, Shantou City, Guangdong Province)laboratory (laboratory: all types of experimental sites that carry out teaching and research within the whole campus, hereinafter referred to as laboratories) to have a safety accident, or to control the accident development in a timely and effective manner after a safety accident occurs. To guide and standardize the rescue and relief activities of the relevant departments, faculty and staff of the campus and the orderly evacuation and self-rescue actions of the students, to minimize the threat to the life and property of the students, faculty and staff of the campus, and the actual situation of the campus. In the case, this emergency plan was formulated.

1.2 1.2 Basis for preparation

1.2.1 Main laws and regulations

（1） 《中华人民共和国突发事件应对法》（主席令第 69 号）

（2） 《生产安全事故应急条例》（国务院令第 708 号）

（3） 《生产安全事故应急预案管理办法》（国家安监总局令第 88 号，2019 年应急管理部令第 2 号修正）《中华人民共和国消防法》（主席令第 6 号）

（4） 《危险化学品安全管理条例》（国务院令第 591 号）

（5） 《易制毒化学品管理条例》（国务院令第 445 号）

（6） 《国家突发公共事件总体应急预案》（国务院第 79 次常务会议通过）

（7） 《教育系统突发公共事件应急预案》(2005 年 1 月 26 日经国务院常务会议审议通过）

（8） 《高等学校实验室工作规程》（原国家教委令第 20 号）、

（9） 《高等学校消防安全管理规定》（公安部令第 28 号）、

（10）《教育部办公厅关于进一步加强高等学校实验室危险化学品安全管理工作的通知》 （教技厅[2013]1 号）

（11）《广东省突发事件应对条例》（2010 年 6 月 2 日广东省第十一届人民代表大会常务委员会第十九次会议通过）

（12）广东省安全生产监督管理局关于印发《广东省安全生产监督管理局关于〈生产安全事故应急预案管理办法〉的实施细则》的通知（粤安监应急[2017]9 号）

（13）

（14）其他相关的法律、法规、规章和规范性文件

1.2.2 主要技术标准规范

（1） 《危险化学品重大危险源辨识》（GB18218-2009）

（2） 《建筑物防雷设计规范》（GB50057-2010）

（3） 《建筑设计防火规范》（GB50016-2014）

（4） 《建筑灭火器配置设计规范》（GB50140-2005）

（5） 《个体防护装备基本配备要求》（GB/T29510-2013）

（6） 《实验室废弃化学品收集技术规范》（GB/T 31190）

（7） 《职业性接触毒物危害程度分级》（GBZ230-2010）

（8） 《科学实验建筑设计规范》（JGJ 91-93）

（9） 《剧毒化学品、放射源存放场所治安防范要求》（GA 1002）

（10）《气瓶安全技术监察规程》（TSG R0006）

（11）《实验室危险化学品安全管理规范-第 2 部分：普通高等学校》（DB11/T 1191.2—2018）

（12）《实验室危险废物污染防治技术规范》（DB11/T 1368）

（13）其他相关技术标准和规范

1.2.3 主要相关应急预案

（1）《汕头市突发事件总体应急预案》

（2）《汕头市气象灾害应急预案》

（3）《汕头市安全生产事故灾难应急预案》

（4）金平区政府及其职能部门的相关预案

（5）《广东以色列理工学院安全事故应急预案》

（6）其他相关的法律、法规、规章和技术标准

1.3 Scope of application

This plan is applicable to accident rescue and emergency management of safety accidents in teaching and researching lab including accident prevention and early warning, emergency preparedness, emergency response and after-the-fact recovery.

This plan can be used as an important reference for government agencies, higher education authorities, emergency management departments or other professional rescue agencies when implementing emergency rescue for our campus.

1.4 Emergency work principles

（1） People-oriented, safety first. In the event of a safety accident in the laboratory, the safety of the students, faculty and staff of the campus is the primary task of emergency work, minimizing casualties.

（2） Be prepared for danger in times of peace. Establishing prevention is better than disaster relief, and it is always unremitting and preventive. Adhere to the combination of prevention and emergency, the combination of normal and abnormal, and prepare for the response to safety accidents.

（3） Fully prepared, scientific rescue. Strengthen publicity, training and education to improve the overall quality of the campus's students, faculty and staff, self-help, mutual rescue and response to various safety accidents in the laboratory.

（4） Based on self-help, seek outside assistance. In the event of an

emergency, we can promptly and promptly take corrective measures, respond positively, and provide self-rescue, and report to the local government and relevant functional Supervisor departments to mobilize the corresponding emergency forces to dispose of them in a timely and effective manner to prevent accidents from expanding and protecting students, faculty and staff’s life and the surrounding enterprises and institutions personnel, community residents and citizens 's lives. Safety and reduce property losses.

（5） Unified command and division of labor. Under the unified leadership, command and coordination of the emergency command department, each emergency rescue personnel shall be responsible for the emergency management of the laboratory safety accidents and on-site emergency response according to their respective duties and division of labor. If necessary, assist and cooperate with other professional emergency rescue teams at the superior level to carry out emergency operations.

2 Accident risk description

2.1 Campus Profile

2.1.1 Basic situation

Gangdong Technion Isreal Institute Technology (GTIIT) is a Chinese-foreign cooperative university with independent legal personality. It is a Chinese-foreign cooperative university with independent legal personality. It is located in Guangdong, a well-known institution of higher learning, Israel Institute of Technology (Technion) and Shantou University (STU). Shantou City.

The Gangdong Technion Isreal Institute Technology was officially established on December 5, 2016 by the Chinese Ministry of Education. It is the first Chinese-foreign cooperative university with independent legal personality to introduce Israel's high-quality higher education resources. It is also the current cooperation between China and Israel in the field of education. Representative project.

Guangdong Institute of Technology will build a research university with internationally recognized high-level education, research and innovation capabilities, comprehensively introduce high-quality educational resources from the world-renowned Israel Institute of Technology, and carry out education and teaching innovation to cultivate innovative capabilities and global Excellent engineers and scientific and technological talents with vision and human qualities.

2.1.2 Geographical location and general layout

The campus is located in Jinping District, Shantou City, in the northwest of the city center of Shantou, covering the entire old town of Shantou. It is adjacent to Jiedong District in the west, Jiedong District and Chaoan District in the north, Longhu District in the east, and Hanjiang District across the sea in the south. Jurisdiction over 17 streets, under the jurisdiction of 160 community neighborhood committees. The area is 108.71 square kilometers. Jinping District is the seat of Shantou Municipal Government and the political, economic, cultural

and commercial center of Shantou City and an important industrial and technological base. It is also an important gateway for the water and land transportation hub of the Shantou Special Economic Zone. Jinping District includes the entire Shantou City area (excluding meteorites) in the early days of liberation and parts of the Zhapu District and Xiapong District of Chenghai County.。

Guangdong Institute of Technology is located at the south side of the 7th Red Park in Shantou University Road and the south section of Shantou University. It covers an area of 623.45 mu (net land), including 102.85 mu of the first campus (North Campus) and 520.6 of the second campus (South Campus). mu. The first phase of the campus is located next to Shantou University, which mainly includes living areas, canteens, teaching areas, experimental areas, office areas, basements, corridors, and other supporting facilities.

The Geographical Location and General Layout are shown in Figure 2.1.1-1 and Figure 2.1.1-2.

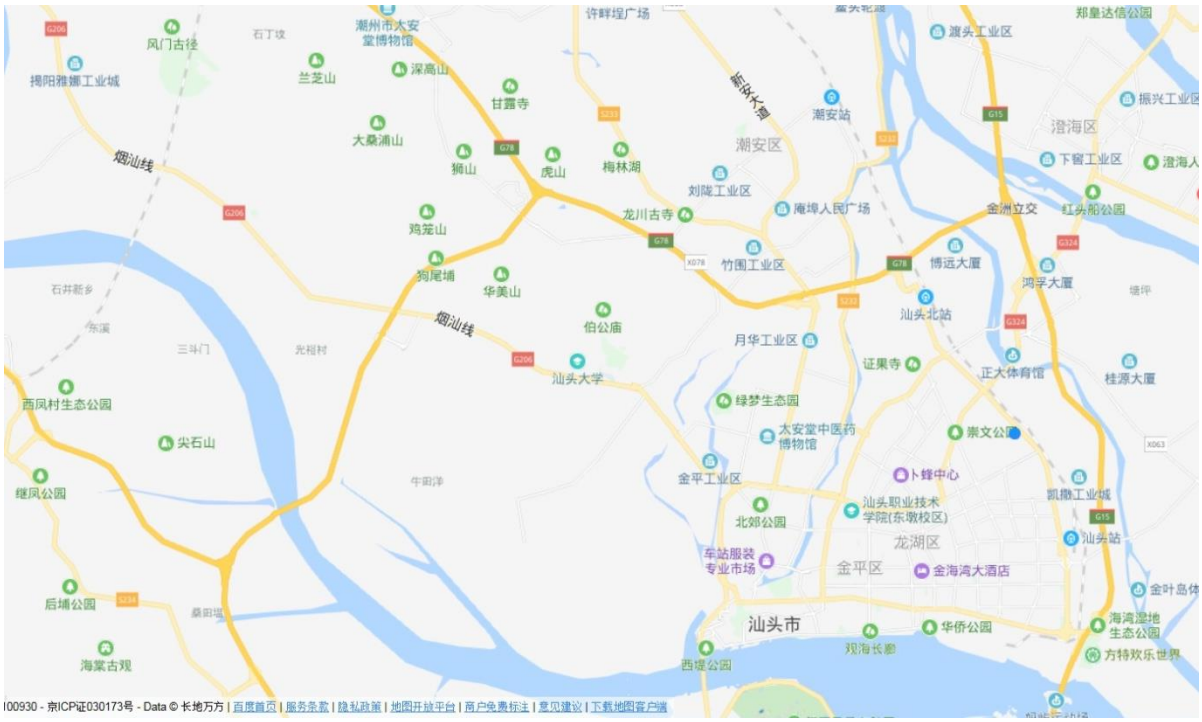


Figure2.1.2-1 Geographical Location Map

Figure2.1.2-2 General Layout

2.1.3 Natural conditions in the area

Shantou City is located in the southeast of Guangdong Province, bordering the South China Sea. It has excellent natural conditions and belongs to the south subtropical monsoon climate. The maritime climate is obvious. There is no hot summer in summer, no cold in winter, short in summer and long winter, long frost-free period, abundant sunshine, abundant rainfall and evergreen seasons. In the winter, the northeast wind or the north wind prevails. Due to the influence of the marine air mass in the summer, the southerly wind is blown normally, and it is often affected by tropical storms, which brings heavy rain, rainy days and rainfall, and the rainfall intensity is high, which is easy to cause flood disasters; Tropical storms are windy and the damage is enormous. The impact of tropical storms is mainly in summer and autumn, and there are few opportunities for tropical storms in winter and spring.

(1) Temperature

Annual average temperature: 21.4 ° C;

Extreme maximum temperature: 38.6 ° C;

Extreme minimum temperature: 0.3 ° C;

(2) Precipitation

Average annual precipitation: 1583.6mm;

The maximum daily precipitation: 297.4mm;

The maximum precipitation in one hour is 83.0mm;

The thunderstorm day of the calendar year: 47.6 days / year.

(3) Sunshine

The average annual sunshine is 2056.9 hours, and the percentage of sunshine is 46%.

(4) Wind conditions

10 minutes average maximum wind speed 34.0m / s, wind direction: ENE

Instantaneous wind speed 52.1m/s, wind direction ENE

The maximum frequency wind direction is EN, which occurs at a frequency of 18%; the subnormal direction is E, which occurs at a frequency of 9%.

(5) Fog conditions

Average foggy days over the years: 20.9 days.

(6) Humidity

The average annual relative humidity is 82%, and the extreme minimum is 8%.

(7) Air pressure

Average annual pressure: 101.28kPa;

Extreme maximum pressure over the years: 103.33kPa;

Extreme minimum pressure over the years: 95.02 kPa.

(8) Earthquake

According to the《建筑抗震设计规范》局部修订稿》(GB 50011-2010 2016), the seismic fortification intensity of the area is 8 degrees, the design basic seismic acceleration is 0.20g, and the design earthquake group is the second group.

2.2 Hazard Sources and Risk Analysis

As a technical and Service units, the laboratory, hazard waste warehouse and

chemical warehouse have various specialties and complexities, from the use and management of experimental items, to the operation of personnel to the equipment and the safety of laboratory materials. It may cause an accident and may have adverse effects on the personnel, equipment, and even the surrounding units and personnel of the campus.

2.2.1 Analysis of the causes of safety accidents in laboratories

(1) Laboratory safety management system is not implemented

The lab management system is not revised and improved in a timely manner, lacking timeliness and relevance, and lab safety management system and operation procedures are not formulated according to the characteristics of disciplines and professions. The emergency plan is not sound and standardized, and lacks emergency disposal contents for different types of experiments and risks. No effective management mechanism for controlled categories of dangerous chemicals, no risk assessment and access management system for dangerous experiments, and no safety operation procedures for instruments and equipment with higher risks

(2) Lack of strict environmental management of laboratory premises

Some chemistry labs had chaotic environmental management, teachers' requirements and instructions to students were not strict, dangerous chemicals, reagent containers and hazardous waste were placed randomly, sockets were overloaded, items were disorganized, flammable items were piled up, and the risk of fire and leakage was high. Some laboratories did not implement the "five double" system for the control of hazardous chemicals, and information such as usage records and inventory levels in the ledgers were missing. Some lab areas, study areas and living areas are not strictly separated, and there is a lack of personal protection, emergency rescue facilities and equipment, and materials and equipment. The corridors and ladder rooms have equipment and debris for a long time, and large equipment is placed on the evacuation routes, and the laboratory

information boards are incomplete, with insufficient safety warning signs.(3) Laboratory facilities and equipment have many hidden problems

Some of the laboratory special equipment (such as boilers, lifting equipment, autoclaves, gas cylinders, etc.) are not registered for use in accordance with the relevant national regulations, and are not subject to annual inspection, personnel are not licensed to work, the operation is not standardized, and dangerous operations are not approved from time to time. Laboratory exhaust system is not up to standard, poor ventilation, fan noise exceeds the standard, the laboratory does not do comprehensive ventilation, individual laboratories also use the direct exhaust method. Corrosive and flammable reagents are stored in conventional cabinets, chemicals are stored in wooden cabinets, and external exhaust biosafety cabinets are used. The number of emergency sprinklers and eye washers is insufficient. The shower eyewash is not equipped with automatic water return, and there is a risk of spillage of shower water with chemical reagents. The bacteria laboratory is a non-negative pressure environment, which may cause aerosol leakage. Gas cylinders are not fixed according to regulations, and there is no status identification plate for gas cylinders and lack of gas leakage alarm and ventilation device.

(4) Irregular management of hazardous chemicals and waste

The control of dangerous chemicals is not strict, the approval and clearance is formal, the whole process management is not implemented, the registration of the list of dangerous chemicals is not standardized, the inventory is not checked regularly, and the accounts are not detailed and specific. Some schools do not establish dynamic and real-time management accounts for controlled hazardous chemicals, such as toxic and explosive chemicals, and do not strictly implement the "five double" regulations, and there are management loopholes. The system of collecting, storing and disposing of laboratory waste is not well implemented, and there is a general lack of laboratory waste collection and registration ledgers, no classified collection areas, no warning signs, no leakage trays, no standardized

labeling of ingredients, and the use of glass waste buckets. There is the phenomenon of mixing domestic waste and chemical laboratory waste.

(5)other reason

Safety awareness and awareness are not strong. The concept of “safety first” and the concept of “people-oriented” have not really been established. The results of scientific research, light safety requirements, and safety work are not strict and the quality is not high.

The safety production laws and regulations that are compatible with the laboratory are not perfect, and the safety management personnel are insufficiently supervised. It is difficult to effectively conduct safety supervision on the laboratory in all directions, all-weather and in the whole process.

The use of laboratory personnel neglects safety requirements, and even if effective safety measures are taken, the accidents are frequent and relatively concentrated.

With the frequent use of teaching and research experiments, the supporting experimental devices and equipment are gradually aging and lack of intrinsic safety. The experimental process is often accompanied by corrosive, infectious, flammable and explosive media. The long-term contact with experimental equipment and equipment will accelerate aging and reduce safety performance. If maintenance and maintenance are not timely, it is difficult to realize the essence. Safety.

The foundation of professional safety management is weak, and on-site safety management is lax. Insufficient set-up of professional management personnel, violations of regulations and violations have not been corrected in time, and effective safety management regulations and systems have been simplified.

2.2.2 Analysis of major hazards and harmful factors in the laboratory

The risk factors inherent in the experimental items themselves or during the reaction process are as follows:

(1) Flammable and explosive Some of the experimental materials are liquids and solids of Class A and B. Based on flammable and explosive chemical properties, these materials have low flash point and are extremely flammable. They can be ignited in the air with only a small ignition energy, and the burning rate is very fast. Some of the Fire Hazardous Materials materials are Class A and B, which are mixed with air to form an explosive mixed gas. If the concentration reaches the lower explosion limit, the ignition source will explode.

（1） Evapus.

（2） Toxic

Most hazardous chemicals contain toxic substances. When they are exposed to high concentrations in air or water, they may experience dizziness, headache, nausea, vomiting, etc. In severe cases, they may cause coma or even death.

（3） Infectivity

If the treatment of some pathogenic bacteria is improper, leakage or damage to the instrument with the operating equipment is the operator's complete exposure to the danger, which may lead to biological infection accidents, causing illness and serious death.

(4) Infectious

Part of the pathogenic bacteria operation process if not handled properly, leakage or with the damage of the operating equipment and instruments is the operator is completely exposed to the danger, can lead to biological infection accidents occur, so that personnel to cause disease, serious cases can lead to death.

2.2.3 Analysis of major hazards and harmful factors in the experiment

The conventional hazards of the experimental process, mainly focused on the material itself and the process, the material itself has been analyzed in the

previous section, this section mainly analyzes the main dangers and harmful factors present in the test process.

Electrostatic charges tend to gather in the pipe wall, tank wall and other locations, when the experimental device on the high-speed spray of hazardous chemicals and the surrounding air friction will likely generate high levels of static electricity. Electrostatic discharge is one of the important causes of fire and explosion accidents. Part of the coefficient of thermal expansion of hazardous chemicals is large, with the experimental heating process of the items gradually rise in temperature, its volume while expanding, if the container is not reserved when filling sufficient volume, the temperature rises, liquid expansion may cause the rupture of the container, the leakage of hazardous chemicals, and then cause secondary disaster accidents.

The dangerous and harmful factors in the process of teaching and research are mainly determined by the characteristics of the process, and are also related to the relevant protective facilities and equipment.

The laboratory design function of the campus is for the teaching staff and students of the campus to conduct teaching and scientific research experiments. It is equipped with more advanced experimental instruments at home and abroad or in the industry. Most of the experimental procedures are automated, so the risk is not high. However, due to the inevitable human-machine contact, and due to management defects, human unsafe behavior and unsafe conditions of the material, accidents in experiments still have some randomness.

The main dangerous and harmful factors that may exist during the experiment are analyzed as follows:

2.2.3.1 Leakage of dangerous substances

Leaks of hazardous chemicals or biological species include liquid leakage and gas leakage. The main manifestations are leakage of equipment (including hoses, pipes, equipment, etc. on experimental equipment). The main causes of leakage are:

（1） Leakage of equipment quality factors, such as unreasonable design of experimental equipment, improper material selection, manufacturing error of the manufacturer, low construction and installation accuracy, failure to inspect and repair according to regulations after long-term use of equipment and facilities, aging of pipes or connecting hoses Corrosion, or damage or rupture under external force, seals of various joints, valves, flanges, and instrument joints of pipes or connecting hoses, poor quality of equipment accessories, failure to replace damaged equipment and equipment in time If the quality of the equipment and facilities changes due to other reasons, the strength of the equipment and facilities may be insufficient, and the pressure, temperature and corrosion resistance may be deteriorated, resulting in leakage of experimental equipment.

（2） Leakage of pipelines in experimental equipment, such as the use of corrosive media in long-term experiments in experimental pipelines, and not timely cleaning after completion of experiments; or impact and wear when corrosive media flows; repeated stress; long-term work at high temperatures Creep; cold and brittle fracture of operating materials at low temperatures; aging metamorphism, etc.

（3） External factors are destroyed, such as external force damage, experimental equipment is in a state of vibration for a long time; equipment installation fails to comply with design requirements; personnel operation causes leakage, etc.

2.2.3.2 Fire

The basic condition causing a fire is combustion. The three elements of combustion are: combustible materials, combustion-supporting substances (air), and ignition sources. Most of the raw materials and reagents used in the laboratory are flammable substances. When the ignition source is encountered, it will be ignited and burned. If the combustion is out of control, it will cause a fire accident.

The ignition sources that may exist in the laboratory are:

（1） Open flame: On-site personnel smoking, illegal use of fire, illegal use of electricity, flying fire generated by external incineration of combustible materials, Mars produced by chemical reaction of substances during the experiment.

（2） Electrical spark: If the design of electrical equipment is improper, the selection does not meet the design requirements, the quality does not meet the requirements or the electrical equipment does not take reliable protection measures, the electrical line is aging, overload, poor insulation, in the event of power failure, In the case of poor contact, short circuit, leakage, etc., it is easy to generate electric sparks and arcs. Electrical sparks may also be generated by using electronic devices such as walkie-talkies, mobile phones, and laptops.

（3） Mechanical sparks: mechanical impacts, impacts, use of metal parts that are prone to sparks, and impact of metal packaging may cause mechanical sparks during use of equipment and equipment.

（4） Lightning sparks: lightning protection measures are not used for building (construction) buildings, electrical lines, and electrical equipment, or lightning protection measures are inadequate, and lightning protection facilities are defective. In thunderstorms, lightning strikes or inductive lightning may cause lightning sparks.

（5） Static sparking: In the dry season or in the environment with humidity control, the human body wears chemical fiber clothes and other static electricity accumulation. If the static electricity is not removed in time, it will accumulate to a certain extent. , generating static sparks.

（6） Other sources of ignition: abnormally high temperature surfaces of equipment, long-term power-on lighting of high-power lamps, fire sources caused by external fires, or disruptive activities such as artificial arson due to management negligence.

2.2.3.3 Explosion

The basic conditions causing an explosion accident: the combustible vapor of the chemical substance forms a mixed gas with the air. When it reaches the explosion limit, an open flame or other ignition source may cause an explosion accident. Leaks in the laboratory that are flammable and volatile are easily volatilized to form vapors, which may accumulate to the explosion limit and present an explosion hazard. The ignition source analysis that caused the explosion is similar to the fire, see the previous section.

2.2.3.4 Electric shock

Poor grounding or zeroing of electrical equipment, facilities, illegal operation of laboratory operators, live working, improper personal protection, and poor monitoring may cause electric shock and cause casualties.

There are electrical shocks, direct contact with electric shocks and indirect contact with electric shocks in production equipment such as distribution lines, lighting lines and lighting fixtures, and temporary lines used for equipment inspection and maintenance. During the inspection and maintenance operation, if the cable is not discharged or inspected, it will be carried out violently, and there is a danger of electric shock; if there is no electrical equipment or line to be repaired during the inspection and maintenance work on the electrical equipment or line Hanging the temporary grounding wire may cause an electric shock accident to the operator who is inspecting and repairing the electrical equipment due to poor contact and sudden power transmission.

Some laboratories may have characteristics such as damp work environment and many metal equipment. If electric circuits or equipment leak or electrician violates regulations (or unlicensed personnel operate illegally), electric shock is likely to occur.

Electric shock is when the person is electrocuted, the electric current through the internal organs of the body, will damage the human heart, lungs, nervous system, etc., so that people appear spasms, respiratory asphyxia,

ventricular fibrillation, cardiac arrest or even death. Electrical injury is the current through the body surface, will cause local injury to the external human body, that is, the thermal, chemical and mechanical effects of the current on the external tissues or organs of the human body caused by injury.

After the person is electrocuted, if the rescue method is not correct, it is easy to cause the death of the electrocution accident. Blind rescue, such as pulling the injured person from the power supply by hand, will cause electrocution accidents to rescue personnel.

2.2.3.5 Poisoning and asphyxiation

Some of the chemicals used in the laboratory are poisonous. Once leaked, toxic vapors may form in the air, which will directly affect the personnel in the laboratory and may affect nearby areas.

In addition, prolonged exposure to toxic and harmful vapors can cause health problems and cause irreversible damage.

2.2.3.6 Noise hazard

Noise can cause temporary or permanent hearing damage to the human auditory system. Long-term exposure to high-intensity noise can cause irreversible damage to the receptors at the bottom of the inner ear cochlea, or permanent hearing damage, resulting in noise deafness, and such deafness is difficult to cure.

In addition, noise can have adverse effects on the human nervous system, cardiovascular system, and digestive system. Its main manifestations are: hearing loss, elevated blood pressure, digestive dysfunction, dizziness, tinnitus and other symptoms. The greater the noise intensity, the longer the contact time, the more serious the damage.

The mechanical structure inside some laboratory equipment generates large noise during operation and causes noise hazard to people who are in contact for a long time.

2.2.3.7 Object Strike

Object striking refers to the movement of an object under the action of gravity or other external forces, which may cause personal injury or death, and does not include objects caused by mechanical equipment, vehicles, lifting machinery, collapse, etc. If the tool or hard packaging material is prevented from falling at a high place, and if the tool is placed unstable, it may fall and injure people, causing the object to hit an accident. Object strike accidents can cause damage to limbs and fractures in light cases, or even death in heavy cases.

2.2.3.8 Mechanical injury

Most of the equipment and facilities used in scientific research test or processing center, such as drilling machines, grinding machines, cutting machines, molding machines, roughing mills, etc., have high-speed rotating or transmission parts, due to various reasons caused by damage to the guard, removal, not timely repair or incomplete, so that all or part of the rotating moving parts are exposed, the operator in the operation, maintenance or in the accident state, can lead to involvement or entanglement injury. If there is a fault does not stop the machine processing, no one to supervise the maintenance, do not hang no-movement sign, not a comprehensive inspection before starting, etc. are easy to cause mechanical injury accidents; when the rotating part of the lack of guardrail shield, operation, scrubbing, the operator touch may also occur impact, clothing or long hair is entangled and cause injury.2.2.3.9Frostbite or burn

Direct contact with low-temperature liquid materials can cause frostbite damage and severe local tissue necrosis. Some liquid chemicals used in the laboratory can be rapidly vaporized when leaked at room temperature and high pressure. Due to the rapid gasification of the liquid to remove heat, local low temperature will be caused. If the operator does not take protective measures, it can cause cold frostbite.

Burning refers to flame burns, burns on hot objects, chemical burns (burning of acids, alkalis, salts, organic matter, etc.), physical burns (burning in the body and outside caused by light, incidental substances), excluding electrical burns and

fires. Burns. Taking corrosive products as an example, in the course of experimental use, if there is a leak or splash accident in a highly corrosive and irritating chemical, and the experimenter does not wear protective equipment, it is prone to chemical burn accident.

2.2.3.8 Biological infection

During the experiment, due to improper operation of biological pathogens, the laboratory equipment was damaged, and the personal protective equipment was damaged, causing the experimental personnel to be exposed to the environment of the pathogenic bacteria, causing the infection of the person.

2.2.3.9 Theft of controlled chemicals (easy to make, explosive, highly toxic chemicals)

Defects in laboratory or warehouse management have led to the theft or misappropriation of regulated chemicals, causing problems in social security problems, which can lead to community panic, death and severe environmental damage.

2.2.4 Range of accidents

（1） General accidents caused by laboratory equipment in the laboratory may cause damage to a single unit or operator injury in a small area. There is basically no expansion trend and risk. The scope of the accident is limited to the independent laboratory unit of the accident. Inside.

（2） When a fire accident occurs in an independent laboratory unit, the fire may spread along the horizontal direction and the upper direction of the accident laboratory, which may affect the left and right laboratories. The scope of the accident has been expanded, but it is still limited to Within the scope of the scientific research building.

（3） Some dangerous articles used in laboratories are characterized by flammable, explosive, toxic, corrosive, etc., and when they leak, local pollution will occur. When a chemical with inflammable and explosive properties encounters an ignition source, a fire may occur, and the liquid

hazardous chemicals that leak may evaporate as the temperature rises. When the vaporized gas is mixed with the air, the explosive concentration is reached. Explosion can occur after the ignition source. After the explosion, not only the shock wave will be injured, but also the experimental equipment and facilities will be damaged. Therefore, if such accidents are not discovered and processed in time, the scope of the accident will be extended to the entire laboratory building or campus.

2.2.5 Accident risk assessment

Accident risk assessment is to identify the hazard and hazard factors of different accident types and characteristics, analyze the possible direct consequences of the accident and the secondary and derivative consequences, assess the hazard degree and scope of the various consequences, and propose prevention and control of the accident. The process of risk measures.

According to the status quo of the laboratory, the campus identifies the existing hazard sources, adopts the "operational condition risk assessment method", analyzes the possible risks, fully evaluates the hazard degree and scope of various types of accidents, and takes corresponding measures. Control measures.

The laboratory accident risk assessment is summarized in Table 2.2.5 below.

Table2.2.5 Laboratory Accident Risk Assessment Summary

No.	Type of accident	Initial impact range	Impact consequences	Hazard degree	Control measures
1	Hazardous substance leakage	Laboratory	Environmental pollution Injury	Significant danger	1. Set safety warning signs, 2. Standardize the operation management during the experiment, 3. Strengthen inspections during experimental
2	Fire	Laboratory	Injury, Equipmentdamage,	Significant danger	1. Set the safety warning sign, 2. Standardize the

No.	Type of accident	Initial impact range	Impact consequences	Hazard degree	Control measures
			Property damage,		operation management during the experiment,Strict control of the fire source.
3	explosion	Laboratory	Injury, Equipmentdamage, Property damage,	Significant danger	1. Set the safety warning sign, 2. Standardize the operation management during the experiment, 3. Strictly control the fire source.。
4	Electric shock	Laboratory	Injury	General danger	1. Set up the isolation device, 2. Set the safety warning label, 3. Equipped with complete personal protective equipment。
8	Poisoning and asphyxiation	Laboratory	Injury	General danger	1. Set the safety warning sign, 2. Equipped with complete personal protective equipment.。
9	Noise hazard	Laboratory	Injury	General danger	1. Set the safety warning sign, 2. Equipped with personal protective equipment.
10	Object blow	Laboratory	Injury	General danger	1. Set the safety warning sign, 2. Equipped with personal protective equipment.

No.	Type of accident	Initial impact range	Impact consequences	Hazard degree	Control measures
11	Mechanical injuries	In the laboratory	Injury	General danger	1. set up safety warning signs, 2. Equipped with complete personal protective equipment
12	Frostbite and burn	Laboratory	Injury	General danger	1. Set the security alert indicator 2. Equipped with personal protective equipment.
13	Biological infection	Laboratory	Injury	General danger	1. Set the safety warning sign, 2. Equipped with personal protective equipment.
14	Theft of controlled chemicals	Inside the campus	Equipmentdamage, Injury	Significant danger	1.Strictly control management; 2. The campus is closed and thoroughly inspected.

3 Emergency organization and responsibilities

3.1 Emergency organization system

The person in charge of the laboratory is the person in charge of the emergency handling of laboratory safety accidents in the campus. The emergency command center of the campus is responsible for leading and coordinating the emergency handling of laboratory safety accidents.

3.2 Command organization, emergency response teams and responsibilities

The campus established a laboratory safety accident emergency response leading group, responsible for accident site command, coordination and emergency response, the main responsibilities are:

（1） Develop and implement accident emergency plans for discipline laboratories according to the type and characteristics of the subject laboratory;

（2） Strengthen safety education and emergency drills to ensure effective implementation of emergency plans;

（3） After the safety accident occurs, it is responsible for protecting the site and coordinating and directing the on-site rescue to ensure that the safety incident is effectively handled in the first time;

（4） Report laboratory safety incidents in a timely and accurate manner.

4 Accident prevention, warning and information reporting

4.1 Safety Accident Prevention and Hazard Source Monitoring and Management

4.1.1 Safety accident prevention

All units of the campus should do a good job in laboratory prevention and early warning to prevent accidents.

（1） Improve the prevention and early warning mechanisms for various possible safety accidents, carry out risk assessment and analysis, and achieve early prevention, early detection, early reporting and early disposal.

（2） Strengthen the daily management of the emergency response mechanism and the training and training of experimental personnel, often carry out laboratory accident drills, improve emergency response plans, and improve the actual combat capability for dealing with emergencies.

（3） All units should regularly evaluate the emergency plan and continuously improve and revise it according to the specific conditions of each unit.

4.1.2 Technical preventive measures

The campus has adopted the following monitoring and monitoring methods, methods and preventive measures for the laboratory:

（1） Set up an industrial monitoring system in public area (security monitoring system).

（2） Set fire water supply system, portable fire extinguisher.

（3） The flammable and explosive independent gas supply system is equipped with an emergency shut-off system.

4.1.3 Management measures

（1）On-site monitoring

During the use of the laboratory, the campus conducts inspection and monitoring of all-weather and whole-process management personnel on-site, checks the implementation of various safety measures, and complies with the

compliance of the laboratory operators (faculty, staff, students, external contractors, etc.) to timely correct the situation. "Three violations" behavior, timely eliminate inspection and monitoring, find hidden dangers, and ensure the safety of laboratory sites.

（2）Security check

Conduct regular or irregular safety inspections, mainly annual, quarterly, monthly safety inspections, daily inspections, professional safety inspections of equipment and facilities, electricity and gas, safety inspection during holidays, temporary safety inspections and night safety inspections, etc. Troubleshoot rectification accidents through various safety inspections.

（3）Safety management

In accordance with the requirements of relevant laws and regulations, the campus has set up a safety production management organization, equipped with qualified professional/part-time safety production management personnel, and formulated a safety production responsibility system and system safety production management rules and regulations system, and formulated various laboratories. Class process procedures, safe operating procedures, safety training and education for all staff (faculty, students, external contractors, etc.).

4.2 Early warning actions

4.2.1 Types of accident warning information

Accident warning information received or collected by members of the emergency organization of the campus and related functional departments mainly includes the following types:

（1） Accident information that may affect or affect the safety of the laboratory;

（2） Information such as safety hazards in various ways and major accidents discovered by on-site monitoring.

4.2.2 Access to accident warning information

The members of the emergency organization of the campus and related functional departments mainly obtain relevant accident warning information

through the following channels：

（1） Early warning information publicly released by the government through the news media;

（2） Forecast information issued or notified by the competent authorities at all levels;

（3） Information obtained by various methods of security inspection, monitoring system and safety information system;

（4） Report on the accident development trend obtained from risk assessment, analysis and prediction of safety accidents that have occurred, secondary accidents that may be caused by accidents, and possible production safety accidents.

4.2.3 Determination of the level of accident warning

In order to quickly and effectively dispose of various types of laboratory safety accidents, combined with the characteristics of the campus, according to the nature, severity, controllability, scope of influence of the accident, and based on the received early warning information and relevant assessment, analysis and prediction results, The accident warning level is divided into four levels: general accident (level IV), major accident (level III), major accident (level II) and special major accident (level I). See Table 4.2.3.

According to the relevant early warning information collected, all members of the emergency organization of the campus and related functional departments should comprehensively evaluate and analyze the relevant accident warning information and related information, such as incident, type, level, nature, consequences and scope of influence, and analyze the possible information of the campus. The impact of the development, the early warning level after a safety accident occurred in a laboratory, immediately reported to the emergency headquarters of the campus, after approval, is the official level of accident warning, issued by the emergency headquarters.

After the accident warning information is released, the emergency

headquarters should pay close attention to the relevant events, the development of the accident or the changes of the government's early warning information, etc., according to the situation change or the government's early warning information, timely adjust the warning level or release the warning, and promptly issue the accident warning level change, etc. information.

Table4.2.3 Laboratory safety accident warning level

Alert level	**Level description**	**Judging criteria**
（I）	Particularly serious accident	It refers to the very complicated situation, which poses a serious harm or threat to the safety and stability of the campus. It has caused or may cause particularly serious casualties and property losses, or seriously damages the ecological environment. It requires the guidance of the superior competent department and the prefecture-level city emergency leadership agency. The relevant departments and emergency agencies work closely together to integrate events and accidents that can be dealt with by social emergency rescue forces and resources.
（II）	Major accident	It refers to a complex situation that poses a serious hazard or threat to the safety and stability of the campus. It has caused or may cause major casualties and property losses, or damage to the ecological environment may affect the off-campus, and events or accidents that need to be assisted by external emergency rescue forces.
（III）	Big accident	It refers to the complicated situation, which poses certain harm or threat to the safety and stability of the campus. It has caused or may cause death, large property loss, or a certain degree of damage to the campus ecological environment. It is necessary to integrate all aspects of the campus's emergency rescue forces and resources for disposal. Event or accident.
（IV）	General accident	It refers to the relatively simple situation, which only causes harm or threat to the safety and stability of the campus in a small scope. It has caused or may cause personal injury and property damage. The ecological environment is partially affected. It can be disposed of by the emergency rescue force and resources of the accident unit. Event or accident.

4.2.4 Release of accident warning information

After the accident warning level is approved and confirmed by the emergency headquarters, it will be released to all departments of the campus. The release procedure is shown in Figure 4.2.4.

The issuance, adjustment and release of accident warning information shall be conducted by means of telephone, fax, SMS, e-mail, and local office network announcement.

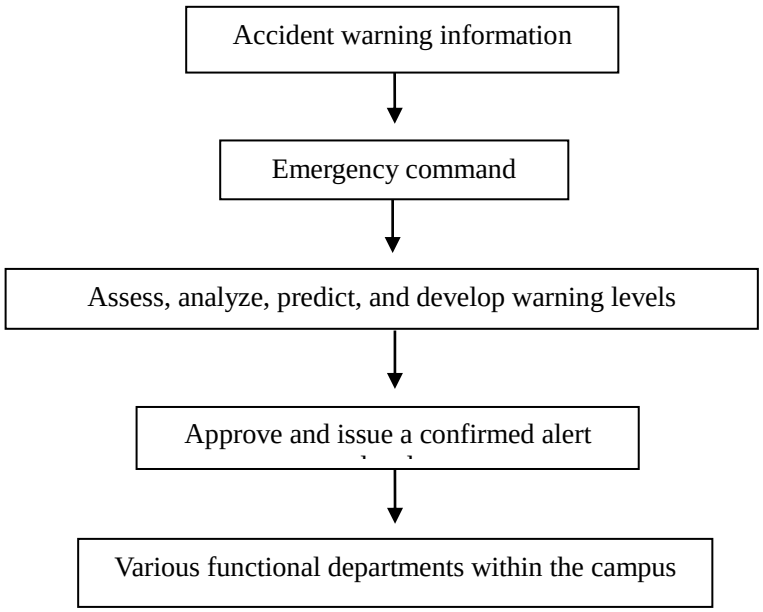


Figure 4.2.4 Accident warning information release procedure

4.2.5 Measures taken during the early warning period of the accident

The emergency command level of the emergency headquarters and related information and forecast results shall take the following measures during the accident warning:

（1） The emergency command department issues an emergency command to initiate the corresponding type of accident.

（2） The on-site command informs all functional departments to enter the early warning state.

（3） The emergency command department mobilizes the necessary emergency materials and equipment according to the needs of developments and emergency response work.

（4） Initiate corresponding emergency response within the early warning area, emergency teams, personnel and materials enter standby status, continuously track changes in developments and early warning information, promptly issue warnings to the affected areas, transfer, evacuate or evacuate relevant personnel and important materials, device.

（5） Ensure the normal operation of communications, transportation, water supply, power supply and other facilities.

（6） A higher-level warning should be issued at the same time as the low-level emergency response is initiated.。

4.3 Information Reporting and Disposal

4.3.1 Information Report and Notification

（1）Emergency watch24-hour emergency watchkeeping telephone set up in the fire duty office:**0754-8807 7119 (24 hours)**。

（2）Internal reporting procedures

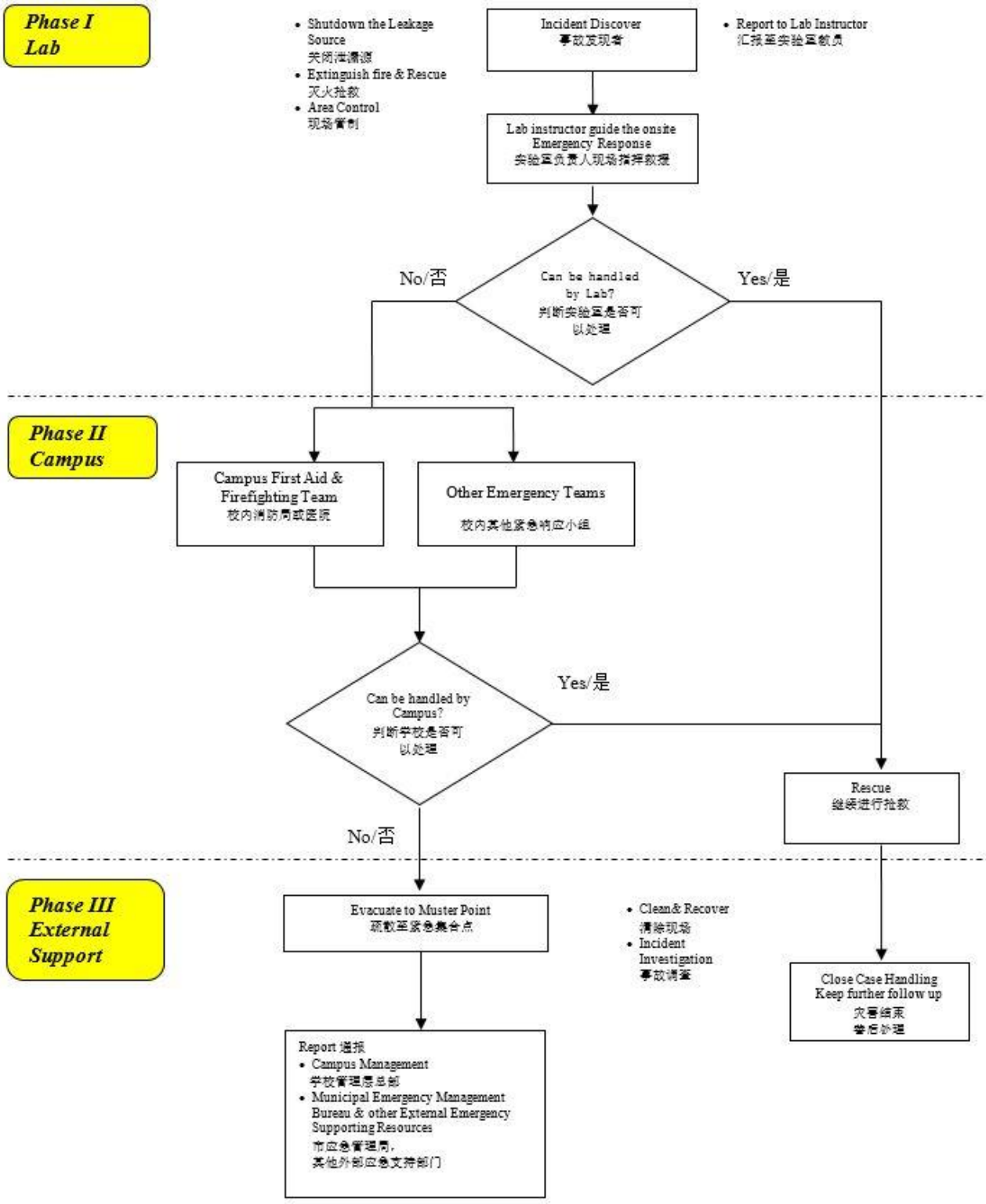
After the accident, the emergency response leading group at each level shall immediately issue the corresponding level of emergency response, and initiate the corresponding level of emergency plan, and dispose of it according to the relevant accident handling plan.

1)The personnel at the scene of the accident is the person responsible for the accident report, and the unit in charge is the responsible unit for the accident report.

2) The person responsible for the report shall immediately initiate the accident reporting mechanism at the same time as the self-rescue and protection site. After receiving the report, the responsible person of the responsible unit shall initially determine the accident situation, conduct on-site disposal, and initiate an emergency plan if necessary. Arrived at

the scene of the accident at one time to assist in the disposal of laboratory safety accidents.

3) The reporting mechanism for laboratory safety incidents is:



4.3.2 Information Reporting

4.3.2.1Accident information report content and time limit

Any laboratory safety incident must be reported, and an objective and detailed report of the incident must not be concealed. For late reports, false reports, false reports and false negatives, the relevant responsible persons shall be given corresponding punishment according to relevant regulations; if a crime is constituted, it shall be transferred to the judicial organs for criminal responsibility. After a certain safety accident has occurred in the laboratory, the emergency headquarters shall immediately report to the relevant higher authorities according to the type and nature of the accident, and submit an accident report in writing within one hour.

The information reported is as follows:：

（1）Overview of the accident unit;

（2）The time, place and scene of the accident;

（3）Brief passage of the accident;

（4）The number of casualties caused by or caused by the accident (including the number of persons whose whereabouts are unknown) and the preliminary estimated direct economic losses;

（5）The measures that have been taken;

（6）Other circumstances that should be reported.。

4.3.2.2Supplement to the new situation of the accident

When a new situation occurs in the development or change of the accident, the accident department (unit) shall report to the emergency headquarters in time; the emergency command department shall promptly report to the relevant competent government departments.

4.3.3 Information transfer

4.3.3.1Departments (units) that may be affected by an accident

The on-site command analyzes and predicts the area of the area that may be affected by the accident and causes harm or loss according to the nature, status

quo and development of the accident, and reports to the accident within the scope of the accident by notice of special person, written notice or telephone or fax. Other external units or personnel notify the following:

（1）The time of the accident;

（2）The nature of the accident;

（3）The brief passage of the accident;

（4）Emergency measures that have been taken;

（5）The extent of the area that may be affected by the accident;

（6）Possible personal or other damages;

（7）Precautionary measures to be taken by the affected units.

4.3.3.2External support unit

The emergency command department analyzes, predicts and judges whether the existing emergency resources meet the needs of emergency response work according to the effects of accident emergency disposal work and development trends, and makes a request for whether or not to request Request for support from the department. After the approval of the campus, the external public relations department will make a support request to the external unit by telephone, fax, etc., including:

（1）The detailed address of the accident unit;

（2）The nature of the accident, brief passage, and emergency measures taken;

（3）The current situation of the accident scene and the development trend of the situation;

（4）Content and requirements that need support;

（5）The specific personnel and contact number responsible for maintaining contact with external units.

4.3.3.3Ministry of Media and Public Affairs

After the emergency headquarters approves the release of the accident information to the news media unit, the emergency headquarters coordinates the

media department to coordinate the news media unit, sends a news release to the news media unit, and organizes and coordinates the reporter's on-site interview.

5 Emergency response

5.1 Response Rating

Response Rating

According to the nature of the accident, the degree of damage, the scope of the impact and the actual situation of the company, according to the principle of grading and responsibility, this plan is divided into three levels of response, see Table 5.1.

Table5.1 Emergency response rating table

Response level	Corresponding to accident and warning levels		Description
	Accident level	Alert level	
Level I response	I	I	When a special accident (Class I) occurs, the campus-level emergency plan is initiated and the emergency assistance is organized. At the same time, report the situation to the municipal-level emergency management agencies and competent authorities, request instructions and assistance, and notify the relevant departments and emergency agencies of the local government to seek social emergency response and resource support.
Level II response	II	II	In the event of a major accident (Level II), start the campus-level emergency plan, organize the implementation of emergency assistance, report to the competent department, request instructions, and contact the relevant government departments and emergency agencies to seek social emergency force rescue and resource support. And follow up in time, understand the progress and effects of emergency treatment, and if necessary, transfer to (I) level response.
Level III response	III	III	When a major accident occurs (level III), start the campus-level emergency plan, organize the implementation of emergency assistance, and the accident unit shall fully cooperate; the campus shall report the accident and rescue situation to the competent department in time, and follow up in time to understand the progress and effects of emergency treatment. In case, if necessary, transfer to the (II) level response.
Level IV response	IV	IV	In the event of a general accident (Level IV), the accident unit initiates an emergency plan, organizes the implementation of emergency rescue, and reports the rescue situation to the campus emergency command center in a timely manner, and promptly follows up and understands the progress and effects of emergency response, and may turn if necessary. In (level III) response.

5.2 Emergency end

The emergency end of a safety incident must meet the following conditions:

(1) The scene of the accident has been controlled.

(2) The environment within the accident site and related impacts complies with relevant standards.

(3) The hidden dangers of secondary and derivative accidents have been eliminated.

According to the situation of the on-site rescue activities, the chief commander of the emergency command can announce the rescue work activities after confirming that “all accidents have been completely solved, no other dangers exist, there are no other conditions that may lead to emergency, and the hidden dangers have been eliminated”.

After the emergency work, the relevant units of the campus actively take measures according to the instructions of the leading group to organize the teaching staff of the campus or entrust an external professional organization to repair and maintain the damaged equipment and facilities. After passing the test, the laboratory can resume. Use to ensure that the campus's teaching, research, and ecological environment are restored to normal.。

6 Information release

Regarding the circumstances of the accident and the emergency actions taken, the accident information shall be published to all sectors of the society in accordance with the principle of “true and timely, open information, and unified release”. It may also be released to the public through the news media in time to avoid public criticism and cause mass. Panic behavior or remarks that affect corporate reputation and rescue operations.

(1) The information to be released to the news media must be uniformly released by the relevant government departments. The relevant departments of the government may designate special personnel to release information. Generally, information is released in a timely manner according to the progress of the accident handling, except for the on-site command and emergency command of the company. Except for the authorization to issue official information, no one may publish any statements related to accidents and rescues.

(2) To inform the surrounding units, the person in charge of the main person in charge of the campus shall designate a special person, and the notification shall be clearly stated: the type, scale, scope of influence, place of occurrence, measures taken by the campus and rescue of the accident.。

8 Safeguards

8.1 Emergency Resources Survey

The campus is about 5.1 kilometers away from the public security fire detachment of Jinping District of Shantou City, and about 6.2 kilometers away from the fire protection base of Shantou City Fire Brigade. In the event of an accident, the rescue team can quickly rush to the scene to carry out fire fighting operations.

The campus is about 2.0 km from the Third Hospital of Jinping District, 10.1 km from the Second People's Hospital of Guangdong Provincial Poison Emergency Hospital, and about 1.1 km from the new campus of the University of Science and Technology.

At the same time, the campus has a medical office and on-duty nurses with preventive, medical and emergency rescue systems that are relatively complete and can meet the needs of emergency rescue.

8.2 Emergency measures

8.2.1 Communication and information security

For the daily work of the laboratory and the actual situation of emergency communication, the emergency communication has the following two guarantee methods: fixed telephone communication (emergency duty telephone) and mobile telephone communication (mobile phone).

The fixed telephone communication (emergency duty telephone) is routinely maintained by the on-duty personnel. If there is a fault, it should be reported to the communication department for repair immediately to ensure that the line is open at all times.

Mobile phone communication (mobile phone) is guaranteed by the various holders. If the mobile phone number of each emergency personnel is changed, the emergency administrator should immediately report the change to ensure that the emergency communication is good and smooth at any time.

The laboratory has an automatic fire detection system and a fire alarm

button to alert you in the event of an accident.

8.2.2 Emergency team protection

The safety production management team of the campus temporarily set up an emergency headquarters in the event of accidents and emergency drills. It has on-site command and emergency teams. The emergency team is under the leadership of the emergency headquarters. Daily study and training according to plan, regular emergency drills according to emergency plan requirements.

The external emergency team mainly includes local public security, emergency fire brigade, medical rescue team and professional rescue teams such as communication, electric power and water supply.

The list of emergency teams and contact telephone numbers can be found in the attachment.

8.2.3 Emergency materials and equipment support

The laboratory relies on the campus's fire protection facilities and has a fire water supply system.In

order to ensure emergency needs, the campus sets up emergency equipment in appropriate parts of the laboratory, all emergency rescue equipment facilities and materials are stored at designated points, and special personnel management is carried out, and all emergency facilities and equipment are inspected regularly, timely replenished and maintained, to ensure that each The quantity and performance of emergency equipment supplies meet the needs of any use.

The list of emergency relief materials and equipment is shown in Annex 3.。

8.2.4 Funding guarantee

The campus's emergency materials and equipment upgrades, maintenance and maintenance costs are included in the annual budget to ensure the implementation of daily updates and repairs and other maintenance costs, as well as the effective implementation of other related safeguards.

8.2.5 Traffic protection

Transportation vehicles that can be called in emergency situations are

implemented by the administrative department of the campus. Daily maintenance and attention should be paid to the maintenance of transportation vehicles to ensure the completion of emergency materials, personnel transportation and evacuation of personnel evacuation tasks.

8.2.6 Security

During the emergency rescue process, the security department of the campus should strengthen the guards of the access control and emergency passages, guide the traffic within the campus, maintain the order of security when evacuating personnel, and strengthen the prevention and protection of emergency relief materials.

8.2.7 Medical insurance

Emergency medical personnel should have skilled medical knowledge and be equipped with common first-aid medicines for dressing, disinfection, anti-inflammatory, and alleviating the symptoms of acute heart attack. Before the professional medical staff arrives, the injured person will be rescued first.

Familiar with the address, transportation route and contact method of the major medical institutions nearby. When the situation is urgent, you can call the vehicle to directly deliver the injured to hospital.

8.2.8 Other guarantees

When responding externally, the emergency headquarters of the campus and the members of the emergency team should assist the government departments in implementing the superior plan and cooperate with other professional rescue teams to carry out emergency work such as transportation security, public security, technical support, medical security, and logistics support.

9 Emergency plan management

9.1 Emergency plan training

In order to ensure the rapid and effective implementation of emergency response to safety accidents, the campus adopts various forms to provide emergency response personnel or on-site operators with appropriate emergency knowledge or emergency skills training.

Make corresponding records on the education and training of relevant personnel, and make a good evaluation and assessment record of the training results.

9.1.1 Education and training content of emergency rescue personnel

（1） Understand the contents of the emergency plan and its amendments and changes.

（2） Identify their respective tasks, emergency methods and action measures in emergency operations.

（3） Familiar with the location of hazardous targets in the laboratory, the characteristics of dangerous goods and emergency treatment plans.

（4） Familiar with the correct use and maintenance of various emergency equipment and safety protection products.

（5） Familiar with emergency alarm methods and alarm procedures.

（6） Basic protection knowledge.

（7） Basic common sense of self-help and mutual rescue.(8) How to safely evacuate people and so on.

9.1.2 Emergency training plans, methods and requirements

The campus formulates an annual drill exercise plan based on the development of teaching and research experiments, and implements each exercise according to the plan. In the actual operation, the problem is continuously found and the emergency team's self-ability is improved. The campus adopts internal

training or entrusts qualified training units to train all staff, students, and outsourced employees.

Emergency training can be carried out in the form of classroom contingency plans, discussion discussions, on-site operation training, fire safety activities, and sand table deduction.。

9.1.3 Assessment of emergency training

After each training, the campus organizes the evaluation of the training effect and records and archives the assessment results. For those who are in critical emergency positions, if the assessment is unqualified, they can be individually strengthened to ensure that the personnel in this position have the ability to respond to the accident.

9.2 Emergency plan drill

9.2.1 Walk organization and preparation

Before each exercise, the campus will organize the relevant units and departments to participate in the campus's emergency response team according to the actual exercise content. In principle, it will be composed of members of the emergency headquarters, and may be externally trained by professional emergency management experts.

The campus's emergency response team is the leading agency for the exercise drills. As a command and implementation department, it exercises overall control over the drills. The development of various drills will be planned by the group, and specific drill plans will be implemented. Relevant departments and personnel will be organized to coordinate the relevant emergency materials and personnel.

9.2.2 Frequency and scope of exercises

The campus plans to organize at least one comprehensive emergency plan drill and two on-site disposal plan drills each year. You can also add some sandbox deductions for simulation exercises. The scope of the drill and the scope of the participants are as follows:

（1） Participants include (according to the needs of the program and the actual situation, but not limited to):

① Emergency rescue personnel

② Faculty and staff

③ Students at the campus

④ Foreign contractors

（2） Exercises include (but are not limited to):

① Comprehensive emergency plan.

② On-site disposal plan.

③ Personnel evacuated urgently.

9.2.3 Drill evaluation and summary

According to the exercise drill plan, the process control list and record table are set up, and the special person is observed to observe the implementation of each drill process, record the progress and disposal implementation, and find out the problems in the drill process in time.

After the drill is completed, the personnel and supervisors participating in the drill should summarize and evaluate the whole process, propose existing problems and improve opinions, set corresponding follow-up personnel and expiration time, and achieve continuous and effective improvement. Evaluation and summary of the situation also requires the formation of a drill evaluation summary record。

9.3 Emergency plan revision

The campus's emergency plan preparation team organizes and interprets according to relevant regulations, and carries out file management, maintenance and update.

The contingency plan assessment is conducted at least every three years under normal circumstances. The emergency plan assessment may invite relevant professional institutions or relevant experts and personnel with actual emergency rescue work experience to participate, and may entrust the safety production

technical service organization to implement if necessary.

In any of the following circumstances, the contingency plan shall be revised and filed in a timely manner:

（1）The laws, regulations, rules, standards and relevant provisions of the superior plan have undergone major changes;

（2）The emergency command organization and its duties are adjusted;

（3）Significant changes in the risk of accidents;

（4）Significant changes in important emergency resources;

（5）Other important information in the plan changes;

（6）Problems found in emergency drills and emergency rescues need to be revised;

（7）Other circumstances that the authoring unit believes should be revised.

10 Accident investigation and treatment

After the accident scene is handled, under the leadership of the campus's safety accident investigation team, the campus and the accident unit responsible person should cooperate with the relevant departments and personnel to investigate the cause, nature, impact, responsibility, experience and aftermath of the accident, and propose corrective measures. Improve the management system and form a summary report. The principal responsible person of the campus reports to the higher authorities according to the actual situation.

The accident investigation should be clear:

（1）Matters reported in the accident situation.

（2） Related matters that need to be transferred to the accident investigation and handling team.

（3）Summary report on accident emergency rescue work.

（4）Work insurance, property and other insurance claims work.

According to the survey results, the units or personnel that cause laboratory safety accidents caused by human factors will be dealt with seriously according to the seriousness of the circumstances and the consequences, and the legal liability of the parties concerned shall be investigated according to law in violation of laws and regulations.

For details, please refer to the campus EHS program "GTIIT_EHS_06_09_Incidnet Report and Inspection Procedure".

Emergency leadership team member contact information

EXTERNAL & INTERNAL CONTACT LIST 校内外主要机构联系方式

NO. 序号	RESPONSIBLE DEPARTMENT 负责部门	CONTACT PERSON 负责人	CONTACT NUMBER 联系电话
LAB EMERGENCY CONTACT OF GTIIT 广东以色列理工学院实验室应急联系人			
1			
2	FIREFIGHTING DEPARTMENT 消防部门	ON DUTY PERSON 消防负责人	8807 7119 (24 HOURS)
3	FIRST AID 医疗救助部门	ON DUTY NURSE 当值护士	8807 7120
4	CAMPUS SECURITY 校园安保部	ON DUTY SECURITY 安保部当值人员	8807 7110 (24 HOURS)
5	CAMPUS EHS OFFICE 校园	EHS OFFICER EHS 主管	8807 7079

EXTERNAL RESOURCES CONTRACT LIST 校外紧急联络电话方式

1.	POLICE 警察 (24-HOUR)	110
2.	FIRE 火警 (24-HOUR)	119
3.	AMBULANCE 紧急救护 (24-HOUR)	120