Annex 2

Preventing Spread of Coronavirus Disease 2019 (COVID-19) Guideline for Airports

Ninth Edition

In order to instruct transport airports to implement routine COVID-19 prevention and control and fully adopt the overarching strategy of "preventing disease importation and domestic resurgence" and the general policy of "dynamic zero-COVID", this ninth edition of the *Preventing the Spread of Coronavirus Disease 2019 (COVID-19) Guideline for Airports* is developed, taking into account of the previous experience and effective practices in pandemic response made by the civil aviation industry, and based on the previous eight editions of the Guidelines and the *Protocol on Prevention and Control of COVID-19* (Ninth Edition) issued by the Joint Prevention and Control Mechanism of the State Council.

1.Regular Prevention and Control Measures

1.1 Daily Monitoring

An airport shall be equipped with calibrated non-contact thermometer equipment to measure the body temperature of all people entering and leaving the terminal. People entering the terminal shall have their health QR code checked as required by the local government. Application of digital technologies such as the Internet of Things, cloud computing, big data and mobile Internet is encouraged to raise the level of daily monitoring.

1.2 Crowd Density Control

Efforts shall be made to optimize passenger flow, set up posts or ground marks separated by one meter in the waiting area, control the number of passengers per ride offered by elevator, and remind passengers to maintain a safe distance. To reduce the risk of cross-infection, use of automation technology, including the use of non-contact services such as self-service check-in and mobile app check-in, shall be encouraged, and baggage check-in and claim process shall be optimized.

1.3 Hand Sanitation

Hand cleaning and disinfection products shall be provided at appropriate locations of the terminal. Passengers are required to clean and disinfect their hands in crowded areas such as check-in counters and screening lanes. They are also required to do so before boarding.

1.4 Air Conditioning and Ventilation

1.4.1 Practical measures shall be taken to enhance air circulation, taking into consideration the structure and layout of the terminal and local climatic conditions. If the temperature is suitable, doors and windows shall be opened to allow natural ventilation. Where there is a crowd, ventilation capacity shall be increased.

1.4.2 For airports with all-air air conditioning system, the fresh air and exhaust system of the air conditioning system shall continue to operate for a period of time at the end of flight services each day. If there is a concentrated occurrence of pandemic in the county (city, district, banner) where the airport is located, the return air shall be turned off. Where a filter device with at lease medium and high filtration efficiency or an effective disinfection device is installed in the return air vent (pipeline) or air conditioner box, the return air can be turned down.

1.5 Cleaning and Disinfection

1.5.1 Facility and Equipment Disinfection

1.5.1.1 Facilities and equipment for passengers' use. Occupancy rate on a vehicle shall be reduced by limiting the number of passengers on a vehicle and increasing vehicle frequency. At the end of daily services provided by ferry shuttle buses and passenger ladder vehicles, preventive disinfection shall be carried out, wiping or spraying with disinfectant high-touched surfaces such as handrails and seats. Tires do not need to be disinfected. Preventive disinfection shall be performed regularly on, among others, elevators/escalators, baggage carts and wheelchairs, focusing on disinfection of high-touch surfaces. Where airport facilities are found to have carried a COVID-19 positive passenger, disinfection shall be performed as required by the local disease control department.

1.5.1.2 Garbage disposal

Garbage sorting, recovery and clean-up shall be reinforced. Garbage recovered from low-risk flight shall, in principle, be handled as ordinary waste. Garbage and waste protective equipment from medium-and high-risk flight shall be put in yellow medical waste bags, and be gooseneck tied. The surface of the waste bags shall then be sprayed with chlorine-containing disinfectant (500mg/L) and disposed of as medical waste. At the same time, after garbage is recovered from medium-and high-risk flight, the trash cans in the

cabin shall be sprayed or wiped with chlorine-containing disinfectant (500mg/L) for preventive disinfection. If a flight is found to have carried passengers confirmed or with suspicious symptoms, and therefore there may be contaminated waste of a contagious nature on board, such waste shall be disposed of as medical waste.

1.5.1.3 Air conditioning and ventilation system. Cleaning and disinfection shall be perform regularly. Hygienic quality, hygienic evaluation, cleaning and disinfection, and operational management shall conform to the relevant requirements included in the *Hygiene Standards for Central Air Conditioning and Ventilation Systems in Public Places* (WS 394-2012), the *Hygiene Standards with Respect to the Operation and Management of Air Conditioning and Ventilation Systems in Offices and Public Places during the COVID-19 Pandemic* (WS 696-2020), the *Regulations on Hygienic Evaluation of Central Air Conditioning and Ventilation Systems in Public Places* (WS/T 395-2012), and the *Cleaning and Disinfection Requirements for Central Air Conditioning and Ventilation Systems in Public Places* (WS/T 396-2012).

1.5.2 Environmental Disinfection in Public Areas

1.5.2.1 Disinfection of public areas including boarding bridges and restaurants, shops, booths and restrooms in the terminal building. When necessary, preventive disinfection of public areas and object surfaces shall be performed based on crowd density (Attachment 1 refers). It is recommended to disinfect the ambient air in the crowded passenger area at least twice a day. The use of automatic disinfection equipment is recommended so as to reduce manual work, avoid cross-infection, and improve efficiency and accuracy.

1.5.2.2 Cleaning and disinfecting the security screening area. Cleaning and disinfecting shall be performed regularly every day, at a frequency adjustable based on crowd density. Wet cleaning and preventive disinfection shall be performed for security screening areas and facilities at the end of services each day, particularly baggage sorting areas, security screening counters, baggage baskets and hand-held metal detectors.

1.5.2.3 Where a COVID-19 positive person or his/her vomit, blood and other infectious body fluids are found in the airport area, disinfection shall be performed following the requirement by local disease and control department.

1.5.2.4 Please refer to Appendix 1 for the operating procedures with respect to the disinfection of ambient air and object surfaces in public areas.

1.6 Handling of Positive and Suspicious Cases

A temporary isolation area shall be set up for persons testing positive and passengers with suspicious symptoms, following the principles of being well ventilated, low in passenger

flow density, being a relatively separated area and being easy for closed management. Warning lines or conspicuous signs shall be set up on the periphery. Fully enclosed tents or other physical partitions may be used for such isolation areas as that used for re-checking body temperature. When conditions permit, an area shall be made available for emergency response staff to wear and remove protective clothing.

Where a positive or suspicious case is found, his/her personal information and contact information shall be immediately recorded. An initial epidemiological investigation shall be conducted in cooperation with local disease control department, followed by proper handling and handover of the suspicious passenger. When the positive or suspicious case left the airport area, the area they passed through shall be disinfected.

1.7 Emergency Supplies Reserve

Emergency supplies shall be stocked when required and as necessary, and be timely replenished after use, including disinfection equipment, medical protective clothing, masks, goggles, disposable sterile gloves, and medical waste bags.

2. Supporting Measures for Flights

2.1 Personnel Classification

2.1.1 Ground staff providing support for inbound flights shall be classified as high-risk personnel if they have made direct physical contact with inbound international aircraft, crew, passengers, garbage, baggage, cargo and those facilities, equipment, documents and tickets used in connection with international flight operation, or have shared space with the above-mentioned personnel, facilities and equipment in a specific time-frame (except for the case of staying in a vehicle which is subject to protective measures).

2.1.2 Cleaning staff and baggage cart (basket) collecting staff who make direct physical contact with domestic aircraft, crew, passengers and baggage and whose working area is rather expansive, and restaurant service staff, commuter vehicle drivers and conductors and dormitory administrative clerk who make frequent contact with employees can be classified as personnel subject to major supervision and control.

2.1.3 Other civil aviation employees can be classified as average risk personnel.

2.2 Supporting Measures for Domestic Flights

2.2.1 Regular prevention and control measures shall be implemented on a daily basis. All staff shall have their health monitored and be personally protected based on the nature of their post and the level of risk prevention and control for the flight (Attachment 2 refers).

2.2.2 Requirements to be met before returning to post. Staff, who have left the airport area for 48 hours to work, rest or for other reasons, must have a negative result for nucleic acid testing obtained within 24 hours and a green health QR code before being allowed to return to work. Airport employees who travelled or lived in medium and high risk areas shall only be allowed to return to work if they have quarantined in accordance with local requirements and have, following the quarantine, a negative result for nucleic acid testing obtained within 24 hours and a green health QR code. Where the local government requires a nucleic acid testing frequency higher than that in this guideline, the requirements of the local government shall prevail.

2.3 Supporting Measures for International Flights

2.3.1 Supporting measures for inbound passenger flights

2.3.1.1 Functional areas serving inbound passengers shall be rationally designated, and baggage handling and disinfection process shall be optimized. Measures shall be implemented to reduce the waiting time for passengers and prevent passengers from gathering, including provision of proper guidance, assignment of a designated personnel to provide services for passengers with special need, and timely communication and coordination with joint inspection units. Closed-loop transfer shall be conducted in a more efficient way.

2.3.1.2 A special lane shall be set up for inbound flight crew. They shall be subjected to epidemiological investigation, nucleic acid testing and customs clearance inspection in separated groups and in an orderly manner, so as to avoid mixing with passengers and other crew members.

2.3.1.3 A dedicated lane shall be designated to transport household and medical wastes in the arrival support areas. If it's impossible to designate a dedicated lane, the lane shall remain unchanged to the greatest extent possible, to avoid traffic mix.

2.3.1.4 Preventive disinfection can be performed for the baggage on international/regional passenger flights as per the guidelines for disinfection of imported non-cold-chain goods (Appendix 2 refers).

2.3.2 Supporting measures for inbound cargo flights

2.3.2.1 Classification of imported goods. The degree to which imported goods are at risk of being polluted shall be examined based on the pandemic development in the originating country (region), goods classification and features, transportation mode, storage duration, the way they are loaded and unloaded, and whether they are cold chain goods or not. For the imported non-cold chain goods, they shall be identified as either low or high risk goods

as per the *Notice on Further Optimizing the Prevention and Control of COVID-19 with respect to Imported Goods* (No. 270 plain-language telegram issued by the National Health Commission (2022)). All imported cold chain goods shall be identified as high-risk goods.

2.3.2.2 Pandemic prevention and control measures shall be implemented for imported goods based on their classification and risk level. Airport cargo station and storage area for low and high-risk goods shall be divided into separate areas based on the risk level of goods. Such areas shall be marked, with no intersection between them. Please refer to Appendix 2 for preventive disinfection of imported goods, and Appendix 3 for the division of airport cargo station and storage area and procedures for airport cargo transshipment.

2.3.2.3 For high-risk imported non-cold chain goods, they can be treated as low-risk goods if they have been kept at room temperature (above 10℃) for more than 24 hours. However, mixed storage shall be avoided. They shall be kept in a designated and clearly marked area, and avoid human contact while being stored.

2.3.2.4 Disinfection of airport cargo facilities and environment. After the goods are picked up or transferred, preventive disinfection of high-touch surfaces of the storage area, operating equipment and vehicles and the public areas shall be carried out based on different risk levels of exposure. For specific disinfection frequency, refer to Attachment 3. Waste produced during the operation process, including outer packaging and plastic film, shall be disinfected collectively. Regular COVID-19 monitoring shall be carried out at cold chain workplace by means of air sampling at a frequency provided for by local government having jurisdiction over the airport.

2.3.3 Requirements to be met by high risk staff before reporting for duty and after leaving their post

2.3.3.1 Preparation before reporting for duty. All high risk ground staff providing support for inbound fights shall be registered under their real name, and shall not be engaged in the ground services for domestic flights while providing support for inbound flights. High risk staff shall receive a booster shot. They shall regularly participate in training on pandemic prevention and control, including professional training on how to correctly wear and remove protective equipment and on related post-specific prevention and control requirements, and shall pass the exam of theoretical knowledge and operating skills before reporting for duty. Employers shall equip high risk personnel with adequate and effective personal protective equipment and disinfectant products. They shall have a negative result for nucleic acid testing obtained within 24 hours and a green health QR code before reporting for duty.

2.3.3.2 Process for leaving post. After leaving their post, high risk staff shall quarantine and receive medical observation for 7 days at their home or collectively, during which they

shall receive a nucleic acid test respectively on the 1st, 4th and 7th day, have their heath conditions monitored, and voluntarily report their body temperature and abnormal conditions (fever, dry cough, fatigue, sore throat, olfactory (taste) loss, diarrhea, etc.). They shall not use public transport on the way home from their post. After the expiration of the medical observation period, they shall continue to refrain from leaving their place of residence (prefecture-level city/district) unless necessary, and avoid crowded public places or gathering.

2.3.4 Closed-loop management of high risk staff

High-risk staff shall be strictly put under closed-loop management and work on regular shifts. Cross gathering shall be avoided, and personal protection, health monitoring and nucleic acid testing shall be ratcheted up.

2.3.4.1 Avoiding cross contact

Designated staff shall be assigned to provide support for inbound flights. High risk ground staff shall not be mixed with those providing support for domestic flights, with no intersection allowed between their working areas. Non-essential direct contact among the high risk staff shall be reduced.

High risk ground staff shall be separated by an appropriate distance while working as long as operational safety is not compromised. Operation by one person is encouraged. Cargo handling staff shall avoid frequent contact with cargo surface. Ground staff including those in charge of loading and unloading, transshipment, sorting, and carrying shall be divided into low-risk and high risk cargo handlers based on the risk levels of imported cargo. Two types of ground staff shall be designated and not be mixed.

While providing support for inbound flight, ground staff shall use designated operating equipment and transportation vehicles. High-risk staff shall not share public facilities and transportation vehicles with passengers and other personnel. Prepackaged foods shall be prioritized when it comes to working meal. Staff shall be arranged to dine in different time, with transparent partitions installed in the case of group dining. When using traffic within the airport during working hours, ground staff shall have their hands cleaned and disinfected and shall not sit in the co-driver seat. If, however, the driver is a member of the working group or a full-time driver designated for the group, ground staff can take the co-driver seat.

While providing support for inbound flight, ground staff shall work and rest in a designated area. Airport shall provide high-risk staff with designated working and resting area. Staff with different work responsibilities shall not rest in the same area at the same time. Timely disinfection of the ambient air and object surfaces shall be performed whenever a group of

staff leave the rest area. Living conditions in the dormitories or temporary accommodation and sanitary facilities for high-risk staff (such as aircraft cabin/cargo hold cleaning staff) shall be improved, with at least an area of 4m^2 provided for each staff.

2.3.4.2 Personal protection for ground staff

High risk personnel shall enhance their awareness of COVID-19 prevention and control, and pay attention to personal protection to avoid cross-infection. Meanwhile, they shall always keep a keen eye on their health conditions. While working, high risk personnel shall wear KN95/N95 masks, goggles or face screens, disposable medical rubber or nitrile gloves, and disposable strip caps. Ground staff can, depending on their job responsibilities, wear disposable shoe covers and protective clothing as long as wearing such protective gear won't compromise operation safety. Cabin/cargo hold cleaning staff shall change their personal protective equipment after each shift. High-risk staff shall wear and remove their protective equipment following standardized practice, and a designated personnel shall be assigned to supervise and guide the process of high-risk staff wearing and taking off protective equipment. For considerations regarding personal protection, refer to Appendix 4.

Staff working in open spaces such as a apron (except for the cleaning, garbage disposal staff working in aircraft) and staff handing low-risk cargo are not required to wear protective clothing as long as they do not come into contact with people from an inbound flight (including crew and passengers) or enter the cabin/cargo hold, and do not share lounges, toilets and other spaces with other high-risk personnel. Maintenance staff working outside the cabin/cargo hold are not required to wear goggles/face screens and protective clothing.

A dedicated area shall be designated for high-risk staff providing support for inbound flight to wear and remove protective clothing. The dedicated area shall be divided into clean area, buffer zone and contaminated area. Each areas shall be conspicuously marked and physically separated. Clean area shall be located at an area where high-risk personnel providing support for inbound flight can wear protective clothing before entering their working area. Buffer zone shall be located at an area where such staff can remove their protective clothing before leaving their working area. Disinfection of ambient air in the buffer zone shall be performed on a daily basis and at least once every 4 hours during the working hours. The removed protective equipment shall be disposed of as medical waste.

2.3.4.3 Health monitoring

High risk ground staff shall pay close attention to their health status by having their health conditions monitored. In case there is nothing new occurring, zero shall be filled in the reporting form. They shall voluntarily report their temperature and abnormal conditions,

such as fever, dry cough, fatigue, sore throat, olfactory (taste) loss and diarrhea, and shall be immediately put under closed-loop management and transferred to a designated health care facility if any suspicious symptom is detected. A designated personnel shall be assigned to record health status of high-risk staff on a daily basis.

2.3.4.4 Nucleic acid test

High-risk staff, when under closed-loop management, shall receive nucleic acid test on a daily basis.

2.3.5 Cleaning and Disinfection of the ground support staff working area and facilities

2.3.5.1 After support is provided to each inbound flight, preventive disinfection shall be performed within the ground support staff working area, including the ambient air, vehicles, facilities and equipment touched by passengers, and high-touch object surfaces (such as elevator buttons and trolleys). There is no need to disinfect the outdoor open space. After risk assessment is made by the local disease control department, regular disinfection of ambient air can be performed on a daily basis based on the actual conditions, so as to provide more efficient support to flights.

2.3.5.2 For the facilities and equipment used by and relevant areas touched by high-risk staff (such as personnel rest area, dining area and concentrated residence), regular preventive disinfection shall be performed on a daily basis at a frequency referred to in Attachment 3.

2.3.5.3 The facilities, equipment and vehicles in the ground support staff working area shall remain within the area. Where they are required to be moved out of such an area to be used elsewhere, they shall not be removed from the closed-loop management until 24 hours after the completion of terminal disinfection.

3. Heat Stroke Prevention in Summer

3.1 Ground staff with diseases that prevent them from working in high temperature conditions (such as hyperthyroidism and active digestive tract ulcers) shall be removed from high temperature working environment timely.

3.2 Working in high temperature conditions can lead to possible loss of salinity and minerals in the human body. While working, ground staff shall drink 2 to 4 cups of beverages (500-1000ml) (with a salinity concentration of 0.1% to 0.3%) every hour, and shall split their intake into multiple times and avoid large quantity intake each time. At the same time, they shall refrain from drinking cold beverages to avoid stomach spasm.

3.3 Rest area, where heat stroke prevention and first aid supplies are made available, shall be set up in apron area. Airport on-site patrols by first aid personnel and other personnel on duty shall be intensified to effectively deal with heat stroke cases.

3.4 According to the *Notice on the Issuance of Guidelines for Heatstroke Prevention for COVID-19 Pandemic Prevention and Control Staff* (No. 59 issued by the Joint Prevention and Control Mechanism of the State Council (2022)), the duration for each individual operation shall be shortened (to less than 2 hours when the temperature exceeds 35℃), and a break no less than 15min and away from high temperature environment shall be taken after having worked continuously in high temperature conditions. Working duration on the apron and cargo handling area between 11:00 and 15:00 shall be minimized when the temperature exceeds 37 ℃.

3.5 Labor protection supplies can be provided based on the working environment and weather conditions, including "cooling vest", "summer protective clothing", "antiperspirant belt", and ventilated protective clothing.

4. **Mental Health Management**

Continued effort shall be made to provide humanistic care and psychological counseling, as well as mental health services for front-line airport employees since they are exposed to the risk of infection while providing support for flight operations. For details, please refer to "11. Aviation Staff Mental Health Management" of the *Preventing the Spread of Coronavirus Disease 2019 (COVID-19) Guideline for Airlines.*

5.**Proper Use of Personal Protective Equipment**

Personal protection recommendations for ground staff are included in Attachment 2. Instructional videos on how properly wear personal protective equipment can be downloaded from the CAAC website or the Physical Examination Certificate Management System for Civil Aviation Employees (https://ams.caac.gov.cn).

Attachment 1

Recommended Disinfection Frequency for the High-touch Object Surfaces in Airport Indoor Spaces

Crowd Density (number of persons/100m^2)	**High-touch Surface Disinfection Frequency**
≤50	Once/4H
50-100	Once/3H
100-150	Once/2H
≥150	Once/1H

Attachment 2

Personal Protection Recommendations for Ground Staff

Staff Category	Flight Risk Level Classification	Mask			Goggle/ Face Screen	Disposable Protective Suit	**Disposable Medical Rubber or Nitrile Gloves**	**Disposable Shoe Covers**	**Disposable Medical Cap**
		Disposable Surgical Mask	KN95/N95	Medical Mask					
Check-in staff	Low	√					√		
	Medium		√		○		√		
Security screening staff	Low	√			√		√		○
	Medium		√		√		√		√
Airports Medical experts	—			√	√		√		√
Emergency response personnel	—			√	√	√	√	√	√
Maintenance staff	—	√					√		
Ground services personnel	—	√							
Cargo, baggage handler	—	√					√		

Ferry shuttle bus driver		Low	√					○		
		Medium		√				√		
Cleaning staff		Low	√			○	○	√	○	○
		Medium		√		○	○	√	○	○
Disinfecting staff		—		√		√	○	√	√	√
Ground staff serving inbound flight	Open space operation	High		√		○		√	○	√
	Low risk cargo handling			√		○		√	○	√
	High risk staff other than the above two categories			√		√	√	√	√	√

Note:

1. ✓ in the table refers to the protective equipment that is mandatory, ○ represents those optional protective equipment that can be selected where necessary based on the actual exposure risks and conditions.

2. Face screens shall be chosen over goggles if there is a risk of contact with passengers' oral secretions. In airtight and small space prone to aerosol accumulation, selection of goggles as a first choice is recommended. As a general principle, goggles and face screens are not used at the same time. KN95/N95 shall be chosen in airtight and crowded places.

3. For flight risk level classification, please refer to the *Preventing the Spread of Coronavirus Disease 2019 (COVID-19) Guideline for Airlines.*

4. Inbound flight ground staff working in open spaces such as the apron (not including cleaning, garbage disposal staff working in aircraft) and staff handing low-risk cargo are not required to wear protective clothing as long as they do not come into contact with people from an inbound flight (including crew and passengers) or enter the cabin/cargo hold, and do not share lounges, toilets and other spots with other high-risk personnel. Maintenance staff working outside the cabin/cargo hold are not required to wear goggles/face screens and protective clothing.

Attachment 3

Prevention and Control Requirements for Vehicles, Production Equipment and Airport Stations in Working Area for Ground Staff Providing Support for Inbound Flight

Items		**Requirements**	**Notes**
High risk vehicles	Disinfection frequency of vehicle cockpit	Vehicle cockpit shall be disinfected every time when the driver enters and exits	Vehicles shall be equipped with disinfection wipes and other protective equipment
	Disinfection frequency of vehicle compartment	Once every trip	Disinfect before loading of goods
	Disinfection frequency of vehicle exterior	Once every trip	——
Storage areas, operating	Disinfection frequency of PMC pallet, box, net cover, strap, container, and other parts	Once every day	——

Items		**Requirements**	**Notes**
equipment, public areas	Disinfection frequency of loading and unloading machinery	Once every entry or exit	——
	Disinfection frequency of storage areas	Once every eight hours	——
	Disinfection frequency of dining area	Once every day	May be equipped with quick-drying hand disinfectant if conditions permit
	Disinfection frequency of resting areas	Once every four hours	——
	Disinfection frequency of restroom	Once every four hours	Be furnished with 84 disinfectant liquid and hand sanitizer
	Ventilation in offices, dining areas, and restrooms	Continuous ventilation while in use	——
	Observation areas set-up	Observation areas shall be set up at body temperature measurement points	——

Items		Requirements	Notes
	Registration of vehicles and personnel entering and exiting airports and stations	100% real-name registration	——
	Health knowledge communication	Be carried out	Through broadcasting, screens, posters, etc.

Appendix 1

Operating Specifications for Disinfection of Airport and Surfaces of Public Facilities

1. Preventative Disinfection

1.1 Air disinfection: use natural ventilation where climatic conditions allow, and chemical disinfection is not recommended.

1.2 Air conditioning ventilation system shall be cleaned and disinfected on a regular basis. For its metal parts, quaternary ammonium salts-containing disinfectant (1000mg/L) shall be the first choice. For its non-metal parts, peroxide disinfectants, such as chlorine dioxide (250mg/L), peracetic acid (0.1-0.2%), or hydrogen peroxide (1-3%), shall be the first choice and could be sprayed or wiped for reaction of 10 to 30 minutes.

1.3 Disinfection of facility surface: crowded places and frequently-touch surfaces (such as self-check-in or check-in counters, document verification counters, buttons in elevators, and handrails) shall be the focuses. Chlorine-based disinfectant (250mg/L-500mg/L), chlorine dioxide (250mg/L), or double-chain quaternary ammonium salt-containing disinfectant (1000mg/L-2000mg/L) could be sprayed or wiped for disinfection, and shall be cleaned with water after 30 minutes of reaction.

1.4 In a bid to prevent secondary hazards, it is not recommended to disinfect areas, such as the ground and security inspection queuing barriers unless there are suspicious pollutants. Ultraviolet rays and ozone can be used in some places instead of disinfectant for environment and facility surface sterilization when conditions allow.

2. Terminal Disinfection

The procedures of terminal disinfection shall follow the Appendix A of the General

Principle on Disinfection for Infectious Focus (GB19193-2015). On-site disinfection personnel shall ensure their personal protection when preparing and using chemical disinfectants. It is recommended to choose one of the following methods:

2.1 Hydrogen peroxide vapor (gas) sterilization devices can be used for integrated disinfection of the air, the environment and surface of objects. The specific operation can be performed according to the equipment instruction manual.

2.2 0.5% peracetic acid, 3% hydrogen peroxide, or 500mg/L chlorine dioxide can be adopted for air disinfection, by way of aerosol spray, with 10-20ml/m³. Windows shall be closed before disinfection, and the surfaces and the space shall be evenly sprayed, starting from up-down, and then from left to right. Windows can be opened for ventilation after 60 minutes of reaction. After spray disinfection, the surfaces of objects may be wiped (swept) in the way of daily disinfection.

2.3 For key passenger areas, 500mg/L to 1000mg/L chlorine-based disinfectant can be applied by spraying or wiping for reaction of more than 30 minutes. If there are contaminated body fluids such as vomit and blood, 10000mg/L chlorine-based disinfectant shall be applied for over 30 minutes before removing the contaminated body fluids, and then the area shall be cleaned and disinfected.

Appendix 2

Preventive Disinfection of Cargo

1. Objects for Disinfection

Based on the *Notice on Further Optimizing the Prevention and Control of COVID-19 with respect to Imported Goods* (No. 270 plain-language telegram issued by the National Health Commission (2022)) and the *Notice on Issuing Work Plans for Nucleic Acid Testing and Preventive Disinfection of Imported High Risk Non-cold-chain Container Cargo* (No.227 issued by the Joint Prevention and Control Mechanism of the State Council (2020)), preventive disinfection of containers of cargo opened inside the cargo warehouse at airports, the outer packaging of all cargo (including cold chain cargo) unloaded from cargo flights with high or medium risk, as well as high-touch surfaces such as the outer surface, the inner wall and the door handles of containers shall be carried out.

2. Principles of Disinfection

The outer packaging of cargo and containers shall respectively subject to preventive disinfection, and repeated disinfection will not be performed in principle; preventive disinfection of key storage warehouse for cargo unloaded from cargo flights with high risk (including cold chain cargo) shall be carried out on a regular basis; disinfection of the outdoors shall not be performed; and nucleic acid tests and preventive disinfection of imported non-cold-chain cargo with low risk level will not be carried out. It is recommended to use automated and intelligent disinfection equipment to reduce manual operation.

3. Selection of Disinfectant

3.1 Preventive disinfection of imported non-cold-chain cargo and related equipment can use peracetic acid (0.1-0.2%), quaternary ammonium salts (1000-2000mg/L), hydrogen peroxide (1-3%), chlorine dioxide (250mg/L), chlorine-based disinfectant (500mg/L) and so on. Ultraviolet rays and ozone can be used for cargo and facility surface sterilization when conditions allow. For the selection of disinfectant, please refer to the *Notice from the General Office of the National Health Commission on Issuing Guidelines for the Use of Disinfectant* (No.147 Supervision Letter issued by the National Health Commission (2020)). For disinfection procedures, please refer to the *Technical Guidelines for Preventive Disinfection and Protection of Imported Non-cold-chain Container and Outer Packaging of Cargo* (No.15 issued by the Joint Prevention and Control Mechanism of the State Council (2020)).

3.2 For the preventive disinfection of cold chain cargo, the transport and storage facility, please refer to the *Technical Guidelines for the Prevention, Control, and Disinfection of*

COVID-19 during the Cold Chain Food Production and Operation Process (No.245 issued by the Joint Prevention and Control Mechanism of the State Council (2020)).

4. Disinfection measures

4.1 If the cargo with high risk level needs to be unpacked, the container shall be disinfected from outside to inside, and frequently touched surfaces such as the outer surface, the inner wall shall be sprayed and disinfected in turn. For the surface of perishable materials, 1000 mg/L ammonium salts-based disinfectant can be applied by spraying, wiping or soaking.

4.2 When disinfecting the outer packaging of cargo with high risk level, the six sides, namely the up, front, left, right, back, and bottom side of the surface shall be thoroughly sprayed and disinfected.

4.3 In order to ensure the traceability of the disinfection results during the operation period, the implementing entity shall record the disinfection in detail, including the date, personnel, location, objects for disinfection, name of the disinfectant, concentration and reaction time. Relevant data and records shall be kept at least for 2 years.

5. Other Matters

5.1 For commodities that are not suitable for disinfection, such as hazardous chemicals, grain, fodder and fodder additives, live animals, and precision instruments, as well as cargo that have no outer packaging or that are likely to be contaminated by disinfectant penetration, preventive nucleic acid tests of COVID-19 and preventive disinfection shall not be implemented. The handling of such commodities shall be subject to the local joint prevention and control mechanism as appropriate.

5.2 Goods that are not suitable for disinfection and goods that have completed preventive disinfection shall be marked on the outer surface respectively to facilitate identification.

Appendix 3

The Setting-up of Airport Cargo Station and Storage Area and Procedures for Airport Cargo Transshipment

1. The Setting-up of Transshipment Area

1.1 After landing, the cargo shall in sequence go through places of the apron, unloading area, transfer area, sorting area, and cargo storage warehouse. The transfer tools and places for cargo with different risks and types shall be set up and be marked.

1.2 Transshipment lines for cargo with low risk level and high risk level shall be set up respectively before the cargo is unloaded and transferred to the sorting area. The cargo transfer areas shall not overlap with each other, and the operating equipment and transportation vehicles involved shall be used exclusively in their areas to avoid mixture. When cargo arrives at the sorting area, operation lines shall be established for cargo with different risk levels in the subsequent procedures such as dissembling, transfer, and warehouse storage. The operation areas shall not cross each other, and the operating equipment and transportation vehicles involved shall be marked and used exclusively in their areas to avoid mixture.

1.3 Complete physical separation shall be achieved as much as possible by means of ground markings, railings and fence to separate the procedures of the transshipment and operation of cargo with low or high risk level. Equipment and areas with high-risk cargo shall be marked with highly recognizable colors. Disinfection points shall be set up respectively in the cargo sorting area and in the area where the cargo (container) with high risk level is loaded for transshipment.

2. The Setting-up of Storage Area

For sorting and storage, cargo with different types and risk levels shall not be mixed but instead shall be placed in separate sections or warehouses. Imported cold-chain cargo, imported non-cold-chain cargo with high risk level, and other cargo shall not be mixed but instead be placed in separate sections. Stored cargo with different types and risks and their corresponding inventory areas shall be marked with highly recognizable colors.

3. Procedures for Airport Cargo Transshipment

3.1 Preparations for cargo handover shall be made based on the information of cargo types.

3.2 The cabin door handles of the aircraft shall be wiped with disinfectant before unloading of the cargo.

3.3 The outer surface of the cargo container shall be disinfected after unloading and before the container is transferred to the sorting area. In the process of unpacking and sorting, the outer packaging of goods shall be disinfected and then put into the storage warehouse.

3.4 In the operation line of cargo loading and unloading, transshipment, and disinfection, the two disinfection locations shall be regarded as separation points, and from front to back, the three areas shall be deemed as contaminated areas, semi-contaminated areas, and clean areas respectively. Different areas shall be marked and the goods shall not flow in the reverse direction during operation.

Appendix 4

Considerations regarding personal protection

1. The mask shall be close to the face, covering the nose and mouth completely. When the mask is on or being removed, hands must not touch the outer layer of the mask to avoid hands contamination.

2. Once contaminated, out of shape, broken, smelled bad or dampened by sweat, facial masks must be replaced immediately with new ones, and hands shall be cleaned with sanitizer both before and after the replacement.

3. Alcohol-based disinfection wipes or instant hand sanitizer shall be used for hand cleaning and disinfection. Hands shall be kept away from nose, mouth and eyes when it is not sure whether they are clean or not.

4. The disposable PPEs generated in the entry area shall be put in yellow medical waste bags, which shall be tightly knotted for centralized disposal as medical wastes.

5. Reusable goggles shall be sterilized and dried every time after use. Goggles with anti-fogging films shall avoid being wiped with disinfectant. Instead, it is recommended that they be washed with clean water, and then exposed to close-range direct ultraviolet lighting for over 30 minutes in rooms with no person inside.

6. With regard to procedures for wearing and removing protective clothing, please refer to Appendix 4 of the *Preventing the Spread of Coronavirus Disease 2019 (COVID-19) Guideline for Airlines*.