

Introduction

These guidelines define the procedures to be followed for entering and working inside clean rooms after a disaster has occurred. Disasters, as defined for the purposes of these guidelines, refer to natural disasters such as earthquakes, typhoons and lightning strikes, as well as man-made disasters such as fires, gas leakage, hazardous chemical leakage (extraordinary events), etc.

Note that these guidelines shall be followed in conjunction with the check lists (Hereinafter referred to as the Preliminary Check Lists) before entering and working inside clean rooms after a disaster occurs. If there is a particular item that is not covered in these guidelines, please observe the precautions on the Preliminary Check Lists.

Basic principles and decision criteria

While giving the highest priority to the safety of human life, the following items are the criteria to be used when deciding to permit entering and working in clean rooms after a disaster has occurred. The final decision to enter the clean room or perform work therein shall be made by the site manager after a safety confirmation is conducted by the client using these guidelines and the Preliminary Check Lists, and with the agreement among each company's safety officers, the on-site personnel, and those in the client's head office. Further, in order to ensure the safety at the site, the on-site personnel may stop working and evacuate the site without the client's approval once they notice a potential danger.

Note that this assumes that the personnel on site were performing under a work request from the client and had received permission from the safety officer to enter the clean room.

1. Overall environmental standards

- (1) An evacuation advisory or order has not been issued by government agency.
- (2) In case of an earthquake, safety shall be ensured based upon an official announcement from a public agency.
- (3) Safe means of transportation to the site and accommodations shall be secured.
- (4) Means of communication shall be secured.
- (5) Places to eat and rest shall be available at the client's premises or in the vicinity.
- (6) A medical facility shall be available in the vicinity.

2. Standards for working on the client's premises (in clean rooms, sub-fab locations, ancillary facilities, etc.)

Both parties shall agree that the safety of the work areas is substantially secured, and an evacuation route is secured.

The agreement of both parties shall be based on the confirmation results of the following items using the Preliminary Check Lists.

- (1) Lighting in the work areas shall be functioning properly.
- (2) General exhaust, and exhaust for acids, alkalies, organic matter, etc. shall be in normal operation.
- (3) Air conditioning shall be in operation, or ventilation in the clean room shall be possible.
- (4) The safety equipment installed in the clean room (gas detectors, fire alarms, etc.) shall be functioning properly, and the measured values shall be no higher than those permitted by the safety standards.
- (5) There shall be no leakage of water or liquids on the floors or ceilings of the work areas.
- (6) The overall layout, passageways, evacuation routes, emergency exits, etc. shall have been secured, and this information and guidance shall be clearly displayed at the site. In addition, on-site broadcasts/communications shall be available.
- (7) There shall be no damage to the under-floor gratings in the work areas, and there shall be no potential danger of falling.
- (8) There shall be no potential danger of objects falling from the ceilings in the work areas or from the unattended transport carts in operation.
- (9) Passageways and work areas shall be secured.

SEAJ Check list before working in a clean room after a disaster (for emergency entry) For implementation by client 1/2

Company name:

Building:

Date: Year / Month / Date / Day / Time (Hr:Min)

Confirmed by:

[Front] Items to check before entering the clean room

Major category	Subcategory	Check items					
		Check point	Check column	Remarks			
1. Check of safety	1) Check of range of clean room entry	(1) Check of entry range	Is the range of the clean room that you are trying to enter clearly identified?				
		(2) Check of work area	Is the work area clearly identified?				
	2) Check of damage and injury	(1) Assessment of damage and injury	Are you able to assess the extent of damage and injury (people and facilities)?				
		3) Evacuation site	(1) Location of evacuation site	Have you checked where the evacuation site is located in the event of an emergency?			
	(2) Knowledge about evacuation site		Have you checked that all of the workers know where the evacuation site is located in the event of an emergency?				
	(3) System of communication after evacuation		Have you checked what system and methods of communication can be used after an evacuation?				
	4) Medical facilities	(1) Medical facilities	Have you checked the location, operating status and contact method of medical facilities?				
	2. Items to check before entering the clean room	1) Understanding the clean room interior	(1) Overall layout diagram	Have you checked the overall layout diagram of the clean room? (Are the locations of hazardous materials, etc. marked?)			
(2) Emergency exits			Have you checked that emergency exits are located in at least two places?				
(3) Locations of installed target devices			Have you checked the locations of target devices and equipment?				
2) Operating status of equipment		(1) Air conditioning	Are the air conditioning and ventilation facilities operating?				
		(2) Means of sensing gas leakage and lack of oxygen	Do you bring a portable gas leak detector and oxygen concentration meter?				
		(3) Lighting	Have you checked the availability of flashlights and lighting?				
		(4) Power supply	Have you checked the status of power supply for the work area?				
		(5) Countermeasures for water leakage and liquid leakage	Do you bring pH test papers in preparation for water leakage and liquid leakage?				
		(6) Fire alarms	Are the fire alarms and smoke detectors in a functioning state?				
3) Preparing to enter the clean room		(1) Protective equipment and protective clothing	Are the required protective equipment and protective clothing in a usable state? (Protective hats, Safety footwear, boots, gloves, etc.)				
		(2) Emergency shower and eyewash	Are you able to check their location and functioning state?				
		(3) Communication method	Do you secure a means of communication (mobile phone, transceiver, etc.) with the outside?				
		(4) Tools and measuring instruments	Do you have the required tools (tools, lighting equipment, detectors)?				
4) Pre-entry determination		(1) Final determination on entry permission	Has it been determined that there is a low possibility of a secondary disaster occurring? (Gas, lack of oxygen, chemicals, etc.)				
Freely use this space if needed.					Entry Permitted	Yes / No	Signature of client's person in charge:

Notes:

* The client is requested to use this check list after understanding the content of the "Guidelines for entering and working in clean rooms after a disaster."

* When a declaration of safety is made after this check list is completed, we request that this information be disclosed to the safety officers of each company.

* Provided checklists are for reference use only, which does not assure the safety of personnel or property at the time of a disaster or thereafter, and SEAJ is not liable for any accident or injury to any personal or persons, or damage to property.

[Back] Items to check after entering the clean room, before working, and when leaving the clean room

"Always enter the clean room with at least one other worker."

Confirmed by:

Major category	Subcategory	Check items				
		Check point	Check column	Remarks		
3. Items to check after entering the clean room	1) Indoor environment	(1) Air conditioning	Are the air conditioning and ventilation facilities operating? Is there any unusual odor?			
		(2) Lighting	Is the lighting lit?			
		(3) Power supply	Is power being supplied to the work areas?			
	2) State of the building	(1) Floors	Are there any floor (grating pile) abnormalities such as broken, slippery, or sunken parts?			
		(2) Passageways and stairs	Are there any risks of danger in the passageways or stairs such as due to breakage, damage, collapse, hazardous materials?			
		(3) Wind-blown and falling objects	Are there any wind-blown and falling objects?			
		(4) State of water leakage and liquid leakage	Is there any leakage of liquid on the floor? Have you checked the chemical pH of the leakage liquid?			
		(5) Walls	Is there any damage to the walls, and is there any risk of walls collapsing, etc.?			
	(6) Fire extinguishers	Are fire extinguishers and fire extinguishing equipment in a usable state?				
4. Items to be implemented after entering the clean room	1) Building	(1) Evacuation routes and emergency exits	Are the evacuation routes and emergency exits in a usable state?			
		(2) Restricted access areas	Are displays installed indicating where restricted access areas are?			
		(3) Work areas	Was it possible to secure the safety of work areas?			
	2) Utility status check	(1) Power supply	Are there any abnormalities such as disconnections or leakage of electricity in the power lines?			
		(2) Piping	Are there any abnormalities to the pipe lines such as damage?			
	3) Detectors and alarms	(1) Fire alarms	Are the fire and smoke detectors operating? (Indicator lamps on, etc.)			
		(2) Gas leak detectors	Are the gas leak detectors and oxygen concentration meters operating? (Indicator lamps on, etc.)			
		(3) Water leakage and liquid leakage detectors	Are the water leakage and liquid leakage detectors operating? (Indicator lamps on, etc.)			
	4) Devices and equipment	(1) Existence of damage	Is there any damage to the equipment?			
	5. Items to implement after leaving the clean room	1) Products	(1) Attachment of harmful substances	Are any hazardous substances attached to the workers?		
2) Health check		(1) Check of worker physical condition	Are there any issues with the physical condition of the workers?			
3) Waste		(1) Waste check	Has waste been treated as prescribed for the work?			
Freely use this space if needed.					Final confirmation	Signature of client's person in

Note:
* If any disaster victims have been found, first of all please contact the relevant departments. Never take any action alone.

Company name:

Building:

Date: Year / Month / Date / Day

Confirmed by:

Major category	Subcategory	Check items						
		Check point	Check column	Remarks				
1. Safety management	1) Check of range of clean room entry	(1) Check of entry range	Is the range of the clean room that you are trying to enter clearly identified?					
		(2) Check of work area	Is the work area clearly identified?					
	2) Check of damage and injury	(1) Assessment of damage and injury	Are you able to assess the extent of damage and injury (people and facilities)?					
	3) Evacuation site	(1) Location of evacuation site	Have you checked where the evacuation site is located in the event of an emergency?					
		(2) Knowledge about evacuation site	Have you checked that all of the workers know where the evacuation site is located in the event of an emergency?					
		(3) System of communication after evacuation	Have you checked what system and methods of communication can be used after an evacuation?					
	4) Medical facilities	(1) Medical facilities	Have you checked the location, operating status and contact method of medical facilities?					
5) Health management	(1) Health management	Did the workers become fatigued? Is it necessary to request assistance?						
6) Entry determination	(1) Entry permission determination	Have you checked the methods to prevent secondary disasters? (Gas, lack of oxygen, chemicals, etc.)						
2. Checking safety in the clean room, subfabs, etc.	1) Understanding the clean room interior	(1) Overall layout diagram	Have you checked the overall layout diagram of the clean room?					
	2) Operating status of safety equipment	(1) Air conditioning	Are the air conditioning and ventilation facilities operating?					
		(2) Means of sensing gas leakage and lack of oxygen	Are the gas leakage detectors and oxygen concentration meters in a functioning state?					
		(3) Lighting	Is the lighting lit?					
		(4) Power supply	Have you checked the status of power supply for the work area?					
		(5) Check of water leakage and liquid leakage	Are the water leakage and liquid leakage detectors in a functioning state?					
		(6) Fire alarms	Are the fire alarms and smoke detectors in a functioning state?					
	3) Preparing to enter the clean room	(1) Protective equipment and protective clothing	Are the required protective equipment and protective clothing in a usable state?					
		(2) Emergency shower and eyewash	Have you been able to check their location and functioning state?					
		(3) Communication method	Do you secure a means of communication (mobile phone, transceiver, etc.) with the outside?					
		(4) Tools and measuring instruments	Do you have the required tools (tools, lighting equipment, detectors)?					
	4) State of the building	(1) Floors	Are there any floor (grating pile) abnormalities such as broken, slippery, or sunken parts?					
		(2) Passageways and stairs	Are there any risks of danger in the passageways or stairs such as due to breakage, damage, collapse, hazardous materials?					
		(3) Wind-blown and falling objects	Are there any wind-blown and falling objects?					
		(4) State of water leakage and liquid leakage	Is there any leakage of liquid on the floor? Have you checked the chemical pH of the leakage liquid?					
		(5) Walls	Is there any damage to the walls, and is there any risk of walls collapsing, etc.?					
		(6) Fire extinguishers	Are fire extinguishers and fire extinguishing equipment in a usable state?					
	5) Building	(1) Evacuation routes and emergency exits	Are the evacuation routes and emergency exits in a usable state?					
		(2) Restricted access areas	Are displays installed indicating where restricted access areas are?					
		(3) Work areas	Is it possible to secure the safety of work areas?					
	6) Devices and equipment	(1) Existence of damage	Is there any damage to the equipment?					
	Freely use this space if needed.				Entry Permitted	Yes / No	signature	
				Responsible Person at the Client			Responsible Person at the Vendor	

Notes:

* Please use this check list to satisfy the criteria of the "Guidelines for entering and working in clean rooms after a disaster."

* Please use this check list when requested by the client's safety officer to enter a clean room such as to perform equipment restoration.

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