

## General Guidelines for Enhanced Site Cleaning Protocols

**These guidelines reflect steps RTX is taking for its sites and is only provided for informational purposes. Appropriate actions to be taken at non-RTX sites should be independently determined in keeping with CDC recommendations**

### Purpose

This document sets forth required cleaning / disinfection protocols for two different types of environmental conditions based on our current knowledge of SARS-CoV-2, the virus that causes COVID-19, and will be subject to future updates, as appropriate. These protocols are designed to help reduce the spread of SARS-CoV-2 from contact with potentially contaminated surfaces. Sites must adopt the following “Enhanced” cleaning / disinfection protocol and establish a ‘quick reaction team’ that will respond when a site needs additional “Deep” cleaning / disinfection (i.e., diagnosed / confirmed case). This guide may be superseded by applicable national, state/provincial and local regulations. You should work with your local and state health officials to ensure any local requirements, protocols and guidelines are followed for cleaning and disinfection.

### Background

- Based on what is currently known about the virus, spread from person-to-person happens most frequently among close contacts (within about 6 feet) involving transmission via respiratory droplets.
- Current evidence suggests that novel coronavirus may remain viable for hours to days on surfaces made from a variety of materials.
- Transmission of novel coronavirus to persons from surfaces contaminated with the virus has not been documented and is not considered a significant transmission route at this time.
- However, cleaning of visibly dirty surfaces followed by disinfection is a best practice measure that Raytheon Technologies is implementing to mitigate potential surface contamination at our operating locations and further reduce employee exposure from this potential transmission route.

### Cleaning / Disinfection Protocols

- **Level 1 Enhanced Cleaning / Disinfection**
  - No Diagnosed<sup>1</sup> / Confirmed COVID-19 Cases
- **Level 2 Deep Cleaning / Disinfection**
  - Diagnosed / Confirmed COVID-19 Case(s)

### Screening of Third Party (Cleaning) Contractors

All cleaning contractors must complete a daily COVID-19 Self-Assessment before entering the site to determine whether they are able to enter the site based on the criteria provided. It is the responsibility of the contractor coordinator for the cleaning company at the site to ensure this happens. Individuals who do not meet the criteria for entering the site will not be allowed to enter the site.

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<sup>1</sup> “Diagnosed” means any one of the following: 1) A health professional diagnosis of COVID-19 via formal documentation; 2) A health professional verbal confirmation of COVID-19 symptoms and is requiring self-isolation; 3) A health professional is requesting that the employee should get a test for COVID-19 (employee is symptomatic)

**Routine Validation of Protocols**

All RTX employees and third party contractors involved with conducting cleaning / disinfection must follow the protocols outlined below, at a minimum. It is the responsibility of the site Pandemic Planning team, Site Incident Support Team (SIST) and/or the contractor coordinator for the cleaning company to ensure that these protocols are followed. The Pandemic Plan manager/Site Operations Leader will designate this role. This individual must periodically observe the actual cleaning process to ensure proper implementation.

Depending on the business or site, cleaning is performed by either RTX employees or third party contractors. All sites must ensure that all persons conducting these activities are appropriately trained in accordance with national, state/provincial and local regulations, wear appropriate personal protective equipment (PPE), understand the symptoms of COVID-19, including how to notify management if they develop symptoms, and at a minimum follow these protocols. If the housekeeping staff are members of a bargaining unit, site leaders should engage with local employee/labor relations partners or HR partners.

At sites where a vendor is used to conduct the cleaning / disinfection, the site must ensure the vendor is capable of performing the work as outlined within this document or locate another vendor who can. Once a vendor is located, efforts must be made to retain them in advance in the event they are needed (i.e., execute contract and service agreements ahead of time).

**Signage**

All site leaders need to mandate that signage be placed on front doors / entrances and in common areas indicating that cleaning / disinfection has been performed. An example of the signage can be found in Appendix B and sites can modify this as appropriate.

## Level 1 Enhanced Cleaning / Disinfection Protocol - No Diagnosed / Confirmed COVID-19 Cases

### 1. Areas to be cleaned

Of primary concern for cleaning / disinfection are areas and surfaces where frequent human contact might provide a reservoir for SARS-CoV-2. While each facility and operation will be different, the following common areas should receive focused attention:

- **Areas of human congregation** (including, but not limited to, offices, conference rooms, canteens/cafeterias, separate kitchen areas, locker rooms and reception areas)
- **Hygiene facilities** (including, but not limited to, lavatories/toilets, shower rooms, hand- washing stations)
- **Dispensaries** (including, but not limited to, medical and first aid stations, emergency shower and eyewash stations)

Frequently touched surfaces for focused coronavirus cleaning include but are not limited to:

- Desktops and all work surfaces
- Doorknobs and door handles
- Access key pads
- Contractor badges
- Light switches and dimmer switches
- Switches and controls
- Computer monitors, keyboards, mice, remotes
- Tablets, laptops, printers
- Telephone equipment
- All chair rests and arms
- Canteen tables and chairs, crockery, trays and cutlery
- Sinks, taps and kitchen areas
- Coffee makers and microwaves
- Toilets, including all surfaces
- Water fountains and drinks dispensers and vending machines
- Elevators / Lifts and their doors and buttons
- Handrails / banisters
- Common-use office supplies (staplers, dry erase supplies, etc.)

### 2. Cleaning frequency

#### a) **Cleaning Staff:**

Common areas should be cleaned at least 2 times daily, and if possible, after every shift. The general guideline is that the more people who contact surfaces, the more frequently that surface should be cleaned. Cleaning staff will be responsible for regular cleaning of common areas frequented by employees.

#### b) **Individuals:**

Cleaning personnel or contractors generally are not responsible for cleaning individual work stations such as desk tops, work surfaces, and tooling. Instead, cleaning /

disinfection materials must be made available for employees to use on individual and shared workstations. Employees should be instructed to clean / disinfect shared workstations at the end of their work-shift. As a best practice, it is also recommended that cleaning / disinfection by employees also be carried out at the beginning of the shift.

### **3. Non-office areas including production areas, shipping, receiving and labs**

Many of our facilities have specific cleaning requirements for production areas, shipping and receiving areas, laboratories, and other non-office areas as dictated by quality systems, Good Manufacturing Practices (GMP), or other requirements. These procedures should be maintained. In many cases, these procedures include helpful disinfection activities that will reduce the risk posed by viruses such as SARS-CoV-2 or other pathogens.

That said, existing procedures may not include disinfection, or may not include disinfection in all areas. In these cases, to the extent that this enhanced cleaning protocol can be implemented without compromising quality or other production requirements, this protocol should be implemented. At a minimum, using an approved disinfectant (see Section 5), each operator and/or the cleaning crew must wipe down the following areas before or after their shift:

#### **a) Production Areas**

- Powered industrial vehicles and associated charging areas
- Crane / Hoist Pendant and associated equipment
- All work surfaces and desks
- Machine controllers and all high touch areas on the machine (e.g., doors)
- Machine tooling, toolboxes and tools
- Chemical Storage Cabinet doors/latches
- Badge readers/clocking stations
- Turnstiles
- Scanners
- Ladders and Hand rails
- Equipment for working at heights
- Vending Equipment (ex. PPE, tooling, other production related materials etc.)

#### **b) Shipping & Receiving**

- Common surfaces / desks, scanners, computers, mice etc.
- All equipment touch points / controls (e.g. pallet wrappers, dock lock controls, etc.)
- Wipe down surfaces in trucker waiting room

#### **c) Laboratories**

- Common surfaces / desks
- All equipment surfaces / controls

#### **d) Clean Rooms**

In clean rooms where face masks are not required, disinfection of surfaces and equipment must be performed using disinfectants (see Section 5) that conform to Quality cleanroom guidelines.

**e) Restricted Areas**

Must be cleaned by personnel who meet site-specific entry requirements.

**f) ESD Areas**

Cleaning of workstations with ESD requirements must be performed using an approved cleaner. At this time, Formula 409 is an approved disinfectant (per the SDS registered under 5813-73 – Clorox Everest) that can be used for this purpose.

**4. Personal protective equipment (PPE)**

As applicable for the specific cleaning / disinfection task being completed, the following PPE may be required:

- Gloves (non-latex)
  - Dispose of gloves after cleaning and wash hands with soap and water for at least 20 seconds
- Safety glasses with side shields
- Safety shoes (where indicated per local site requirements)

**5. Disinfectants**

Many products contain the appropriate concentrations of active ingredients (AIs) for disinfection of areas that are very likely to be contaminated with SARS-CoV-2 virus. Lists of disinfectants for different regions are provided below:

United States

For disinfection, most common EPA-registered household disinfectants should be effective. Follow the CDC Guidance, which includes one of the following:

- [Products with an EPA-approved viral pathogens claim<sup>2</sup>](#)
- Diluted bleach solution, if appropriate for the surface
- Alcohol solution with at least 70% alcohol

Canada

Use only [approved disinfectants](#) that have a Drug Identification Number (DIN) given by Health Canada, which confirms that the disinfectant is approved and safe for use in Canada.

Europe

[European Centre for Disease Prevention and Control, Interim Guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2 \(2/18/20\)](#). Look under the environmental cleaning options section for a list of active ingredients.

Singapore

[Singapore National Environment Agency, Interim List of Household Products and Active Ingredients for Disinfection of the COVID-19 Virus” \(2/23/20\)](#)

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<sup>2</sup> The primary products included on the EPA list may have more recognizable brand names, but there are often “distributor products” that are identical. These can be identified by comparing the first two segments of the EPA registration number, as the third segment is just a distributor ID number. For example, EPA Reg. No. 12345-12-2567 is a distributor product with an identical formulation and efficacy to the primary product with the EPA Reg. No. 12345-12. If EPA Reg. No. 12345-12 is on the list, you can buy EPA Reg. No. 12345-12-2567 and be confident you’re getting the same EPA approved disinfectant.

## Level 2 Deep Cleaning / Disinfection Protocol – Diagnosed / Confirmed COVID-19 Case(s)

### 1. Actions needed before implementing this cleaning / disinfection protocol:

- Remove diagnosed / confirmed infectious personnel from the area and the site.
- If it has been more than 7 days since the person with diagnosed /confirmed COVID-19 visited or used the facility, additional Level 2 Deep cleaning / disinfection is not necessary as long as Level 1 Enhanced cleaning / disinfection has taken place.
- The appropriate site personnel shall conduct an assessment and provide a recommendation to the Pandemic Planning Team or Site Incident Support Team (SIST) chair on area or site closure, including areas to be cleaned
- Close off areas and post signage (see Appendix B) used by the diagnosed/confirmed case. This is normally accomplished by closing doors or erecting critical barriers with 6 mil polyethylene sheeting to facilitate source containment. The work area shall be locked when unattended. The closure area includes the person’s workstation and 6ft/2m around the workstation, restrooms, kitchenette/cafeteria, conference rooms/common areas where they have been the previous 7 days, at a minimum. If the individual was mobile throughout a site, large scale temporary closure may be necessary to ensure proper precautions and disinfection can be conducted.
- If possible, open outside doors and windows and use ventilating fans to increase fresh air circulation in the affected area. This will help shorten the time it takes respiratory droplets to be removed from the air.
- Wait a minimum of 2 hours and as long as practical up to 24 hours before beginning cleaning/disinfection. Use this time to research who may have been in contact with the employee and other exposure areas that may need to be addressed.
- If an authorized facilities/building operator needs to enter a space of diagnosed impact during cleaning or after temporary closure, they are required to follow the PPE guidelines in Section 5 or as determined by site EH&S personnel.

### 2. Office / Common Areas

Surfaces determined to have been potentially contaminated by a person with diagnosed/confirmed COVID-19 should be cleaned and disinfected. These surfaces should include any areas occupied and/or touched by the individual, which may include:

- **Areas of human congregation** (including, but not limited to, offices, conference rooms, canteens/cafeterias, separate kitchen areas, locker rooms and reception areas)
- **Hygiene facilities** (including, but not limited to, lavatories/toilets, shower rooms, hand-washing stations)
- **Dispensaries** (including, but not limited to, medical and first aid stations, emergency shower and eyewash stations)
- **Specific examples of commonly touched surfaces include, but are not limited to:**

Kitchen / Cafeteria / Food Areas	Bathrooms / Locker Room	Conference rooms
tables and chairs countertops cabinets and pulls	bathroom stalls countertops cabinets/vanities and pulls	chairs computer equipment countertops

doorknobs floors-hard surfaces/wood mats food contact surfaces light switches paper towel/napkin dispensers push doors salt and pepper shakers sink hardware soap dispensers tabletops	doorknobs floors-hard surfaces/wood handrails light switches paper towel/napkin dispenser sink hardware sinks soap dispensers toilets	doorknobs floors-hard surfaces/wood small hard surface items light switches mats carpet paper towel/napkin dispensers sink hardware sinks soap dispensers tabletops/desktops
<b>Offices</b>	<b>Hallways / Stairwells</b>	
chairs telephones computer equipment countertops doorknobs floors-hard surfaces/wood light switches shared office equipment tabletops/desktops water fountains carpet rugs	doorknobs floors- hard surfaces/wood handrails light switches water fountains carpet	

### 3. Manufacturing Areas

Cleaning / disinfection of production, shipping and receiving, laboratories and other non-office locations should be carried out in consultation with Quality, Operations and other functions as appropriate to ensure selected disinfectants (See Section 6) and proposed methods are acceptable from a quality and production perspective.

In general, products should not be cleaned without the express direction and approval from Quality staff. These materials should be removed from work surfaces to the extent possible and covered with plastic to minimize the risk of inadvertent contact with chemicals before cleaning/disinfection begins.

RTX personnel may be required to secure the area/equipment and/or provide escort or monitoring duties for uncleared contractors when performing cleaning/disinfection of impacted areas. All RTX personnel entering the affected area shall abide by the following:

- Wear PPE as outlined in Section 5 prior to entering the impacted area
- Maintain a minimum of 6-feet with line of sight
- Avoid touching any surfaces prior to cleaning, including door knobs, keypads and other horizontal surfaces
- Dispose of all PPE upon leaving the impacted area
- Contact local Security for guidance on protection of classified information or equipment

**a) Production Areas**

- Powered industrial vehicles and associated charging areas
- Crane / Hoist Pendant and associated equipment
- All work surfaces and desks
- Machine controllers and all high touch areas on the machine (e.g., doors)
- Machine guard access points
- Machine tooling
- Toolboxes and tools
- Medical clinics
- Chemical Storage Cabinet doors/latches
- Badge readers/clocking stations (and adjacent walls)
- Turnstiles
- Scanners
- Ladders
- Hand rails
- Equipment for working at heights
- Product / Non-product cribs
- PPE Vending Equipment

**b) Shipping & Receiving**

- All of the above, if applicable
- Pallet Wrappers
- Dock lock controls
- Delivery personnel areas

**c) Laboratories**

- Work Surfaces
- All equipment surfaces / controls

**d) Clean Rooms**

In clean rooms where face masks are not required, disinfection of surfaces and equipment must be performed using disinfectants (see Section 6) that conform to QA/QC cleanroom guidelines.

**e) Restricted Areas**

Must be cleaned by personnel who meet site-specific entry requirements.

**f) ESD Areas**

Cleaning of workstations with ESD requirements must be performed using an approved cleaner. At this time, Formula 409 is an approved disinfectant (per the SDS registered under 5813-73 – Clorox Everest) that can be used for this purpose.

**g) HVAC Systems**

Continue to run HVAC systems as usual and attempt to use 100% outdoor non-recirculated air if feasible. Avoid any immediate filter changes (within a few days of a confirmed case) on the HVAC units in question. Additional duct cleaning / disinfection is not advised at this time.



#### 4. Cleaning / Disinfection Approach

##### a) Hard (non-porous) surfaces

- If hard (non-porous) surfaces are dirty, they should be cleaned first using a detergent or soap and water prior to disinfection.
- Select an appropriate disinfectant listed in Section 6 and prepare / apply in accordance with the manufacturer's recommendations. **Disinfectants have a specified contact time that must take place in order to be effective. Ensure that you follow the specific contact time listed by the manufacturer before rinsing or removing the disinfectant.**
- Wipe all identified areas with disinfectant and allow to air dry if feasible. Where applicable, mop floors with disinfectant and let air dry.
- Disinfectants should be applied to surfaces using a damp cloth. They should not be applied to surfaces using a spray pack, as coverage is uncertain and spraying may promote the production of aerosols. The creation of aerosols caused by splashing liquid during disinfection should be avoided. A steady sweeping motion should be used when disinfectants either floors or horizontal surfaces, to prevent the creation of aerosols or splashing. Disinfection methods that might aerosolize infectious material, such as the use of compressed air, must not be used.
- All walking/working surfaces in the identified affected area should be cleaned and disinfected. In general, items only need to be cleaned / disinfected to a height of 8' from the ground. See Sections 2 and 3 for examples of the items in the areas that should be cleaned.

##### b) Soft (porous) surfaces

- For soft (porous) surfaces such as carpeted floor, rugs etc., remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces prior to disinfection.
- If porous items can be laundered, launder items in accordance with the manufacturer's instructions using the warmest appropriate water setting for the items and then dry completely. Otherwise, use products that are approved for use against SARS-CoV-2 in Section 6 and suitable for porous surfaces.

##### c) General

- If an authorized facilities/building operator needs to enter a space of diagnosed impact during cleaning or after temporary closure, they are required to wear a smock/gown and disposable gloves.
- When using chemical products for cleaning / disinfection, it is important to keep the facility ventilated (e.g. by opening the windows) in order to protect the health of cleaning personnel.
- Cleaning must be performed using the proper personal protective equipment (PPE). Gloves should be removed and discarded if they become soiled or damaged, and a new pair worn. At a minimum, non-single use PPE should be decontaminated using the available disinfectants
- All other disposable PPE should be removed and discarded, after cleaning/disinfection activities are completed.
- The use of disposable or dedicated cleaning/disinfection equipment is recommended; keep cleaning/disinfection equipment to a minimum.

- Hands must be washed with soap and water for 20 seconds immediately after the PPE is removed.
- All waste generated from the cleaning/disinfection (PPE, cloths, wipes etc.) must be disposed via federal, state and local regulations.

## 5. Personal Protective Equipment

The risk of exposure to the virus that causes COVID-19 during cleaning/disinfection is inherently low according to the Center for Disease Control (CDC). Operating locations must perform an assessment to determine the appropriate level of PPE required and ensure compliance with any federal, state or local regulations. As a reference, the CDC recommends the following:

- Disposable gloves, compatible with the chosen cleaner / disinfectant
- Disposable smock/gown
- Safety Glasses
- Additional PPE may be needed depending upon the circumstances and chosen cleaner / disinfectant and as required by EH&S
- A designated area must be established for donning and doffing PPE outside the affected area. All donning and doffing should take place in this designated area. This area should be isolated and will have to be cleaned, disinfected, and maintained.
- Appropriate donning procedures must be established and adhered to throughout the cleaning and disinfecting process. Cleanup personnel should don PPE prior to entering the affected area and engaging in cleaning and disinfecting surfaces, and/or manipulating contents. Donning procedures should be observed by trained personnel.
- During the cleaning and disinfecting process, cleanup personnel must keep their PPE on while working in the space. Cleanup personnel should avoid touching any exposed skin while working to limit dermal exposure.
- Appropriate doffing procedures must be established and adhered to throughout the cleaning and disinfecting process. When removing PPE and other soiled materials, do not allow the outer surfaces of PPE and other soiled material to contact bare skin. Doffing procedures should be observed by trained personnel. Personal hygiene best practices should be observed after exiting the workspace (see Appendix C).

## 6. Disinfectants

Many products contain the appropriate concentrations of active ingredients (AIs) for disinfection of areas that are very likely to be contaminated with SARS-CoV-02 virus.

Please consult your product integrity committee and / or materials engineers, along with EH&S, for specific guidelines regarding usage of disinfectant solutions in your facility in order to minimize attack or deterioration of parts, raw materials, equipment, while meeting safety and environmental protection requirements.

Lists of disinfectants for different regions are provided below. Note that use of disinfectants from the list below must be coordinated with and evaluated by the product integrity committee and / or materials engineers of associated product for manufacturing sites:

### United States

For disinfection, most common EPA-registered household disinfectants should be effective. Follow the CDC Guidance, which includes one of the following:

- [Products with an EPA-approved viral pathogens claim](#)<sup>3</sup>
- Diluted bleach solution, if appropriate for the surface
  - If preparing an appropriate diluted bleach solution, mix the following:
    - 5 tablespoons (1/3<sup>rd</sup> cup) bleach per gallon of water or
    - 4 teaspoons bleach per quart of water
    - Allow a contact time of a least 1 minute for all surfaces being disinfected
- Alcohol solution with at least 70% alcohol

#### Canada

Use only [approved disinfectants](#) that have a Drug Identification Number (DIN) given by Health Canada, which confirms that the disinfectant is approved and safe for use in Canada.

#### Europe

[European Centre for Disease Prevention and Control, Interim Guidance for environmental cleaning in non-healthcare facilities exposed to SARS-CoV-2 \(2/18/20\)](#). Look under the environmental cleaning options section for a list of active ingredients.

#### Singapore

[Singapore National Environment Agency, Interim List of Household Products and Active Ingredients for Disinfection of the COVID-19 Virus” \(2/23/20\)](#)

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<sup>3</sup> The primary products included on the EPA list may have more recognizable brand names, but there are often “distributor products” that are identical. These can be identified by comparing the first two segments of the EPA registration number, as the third segment is just a distributor ID number. For example, EPA Reg. No. 12345-12-2567 is a distributor product with an identical formulation and efficacy to the primary product with the EPA Reg. No. 12345-12. If EPA Reg. No. 12345-12 is on the list, you can buy EPA Reg. No. 12345-12-2567 and be confident you’re getting the same EPA approved disinfectant.

## Appendix B Example Cleaning / Disinfection Signage

CONFERENCE ROOM – CLEAN CONFIRMATION

**This room has been cleaned as a part of the company's COVID-19 site precautions.**

- Door handles
- Telecommunication console
- Remote controls
- Light switch
- Table top
- Arm rest of chairs
- Dry eraser and dry eraser pens

CONFERENCE ROOM – AWAITING CLEAN CONFIRMATION

**Please do not enter.**  
**This room is awaiting cleaning as a part of the company's COVID-19 site precautions.**

Facilities/Janitorial crews have been notified

## Appendix C

### Personal Hygiene

1. Avoid touching any exposed skin while in the work area to limit dermal exposure.
2. Do not eat, drink, smoke, apply cosmetics or lip balm, or handle contact lenses within the work area.
3. If handwashing facilities are available, wash hands and any other skin with soap and water, as soon as feasible, after doffing PPE. Dry with a single-use towel.
4. If handwashing facilities are not available, use antiseptic cleanser (minimum 70% alcohol) and single-use towels or antiseptic towelettes. Hands should be washed with soap and running water as soon as feasible.