Risk Assessment [Ref Number: 21076]

Date Printed: Wednesday, 10 June 2020

Name	Risk framework for conducting training at MCN (Melbourne Centre for Nanofabrication) Cleanroom facilities during the COVID-19 pandemic	Current Rating	Residual Rating
Location		Low	Low

Business Unit	Last Review Date	Risk Owner
	12/05/2020	Bernard C Orelup III

Risk Assessment Team	Risk Approver
Bernard C Orelup III (Engineering & Quality Manager) Sean Langelier (General Manager) Nicolas Hans Voelcker (Professor (Research))	Nicolas Hans Voelcker

Additional Notes

Describe task / use

The MCN is an NCRIS funded facility. NCRIS core funding depends on usage metrics. Training of new users including from industry is critical to sustain our operation.

MCN's cleanrooms are ISO7 (Class10K) and ISO5 (Class 100) certified environments which have HEPA (high-efficiency particulate air) filters throughout. Within these environments, which according to the International Organisation of Standard (ISO) 14644-1 are 100 and 10,000 times more "clean" than standard room environments, close contact training (< 1.5 metres) is needed at select times to provide the needed training of equipment operation to its users/clients.

This risk assessment outlines some controls measures that can assist in reducing the potential for workers (including staff, students, contractors and visitors) to be exposed to COVID-19 during the delivery of training by the Melbourne Centre for Nanofabrication (MCN) staff to its users/clients within the cleanroom environments.

COVID-19 arises from a novel Corona Virus, symptoms range from a mild cough to pneumonia. Some people recover easily, others may get very sick very quickly. There is evidence that it spreads from person to person. Good hygiene can prevent infection. (https://www.health.gov.au/health-topics/novel-coronavirus-2019-ncov). The mortality rate is estimated to be between 3-5%. A majority of patients with COVID-19 are adults. Effective management and prevention of COVID-19 focuses on early recognition, immediate isolation and

implementation of appropriate infection prevention and control (IPC) measures.	

Risk Factors

Risk Factor	7.2 - Human bodily materials (e.g. urine or blood)

Description

Infection as a result of a worker breathing in contaminated human bodily material. This occurs through normal respiration but is greatly exacerbated as a result of coughing or sneezing.

- 1.0 - Fixed plant (e.g. cool rooms, fume cupboards, safety showers, boilers, lathes, lifts, gas mains, PET scanners) -- No
- 2.0 - Transport and mobile plant (e.g. motor vehicles, forklifts, walky stackers, trolleys and wheelbarrows) -- No
- 3.0 - Powered equipment, tools and appliances (e.g. computers, workshop equipment, kitchen equipment, gas cylinders) -- No
- 4.0 - Non-powered handtools and equipment (e.g. furniture and fittings, ladders, handtools, packing equipment, glassware) -- No
- 5.0 - Chemical materials (e.g. dangerous goods, hazardous substances, poisons and drugs) -- No
- 6.0 - Materials and substances (not otherwise selected from category 5.0) -- No
- 6.3 - Fire and smoke -- No
- 7.1 - Outdoor working environment (e.g. carparks, walkways, outdoor stairs) -- No
- 7.2 - Indoor working environment (e.g. internal rooms, floor surfaces, stairwells) -- No
- 8.5 - Biological materials (e.g. animals, non-living animal materials, microorganisms) -- Yes
- 8.4 - Personal impairment and/or interaction (e.g. pre-existing medical condition, assisting a patient) -- No
- 9.1 - Psychological (e.g. stressful situations) -- No

Low	Low
Existing Controls	**Proposed Controls**
• 1 - Elimination of Risk: As appropriate and feasible (<10% of the time), remote sessions (via video or Zoom) outside of the cleanroom are given for early on introductory equipment trainings. But given the need for direct instruction and observation, the majority of trainings (>80%) need to proceed face to face within the cleanrooms at the MCN. • 3 - Isolation of risk: Within the cleanroom, (>90% of the time) during training, distancing of at least 1.5 metres between MCN staff and the client (commonly referred to as social distancing) is maintained. • 3 - Isolation of risk: MCN's cleanrooms are ISO7 (Class10K) and ISO5 (Class 100) certified environments which have HEPA (high-efficiency particulate air) filters throughout. According to the International Organisation of Standard (ISO) 14644-1, these environments are 100 and 10,000 times more "clean" than standard room environments. (See image attached) • 4 - Engineering control measure: Within the cleanroom, the max time for less than 1.5metres distancing between staff and client (due to training requirements) will be for 5min intervals with a max total daily time of 60min per staff. • 5 - Administrative control measures: Posters outlining social distancing requirements are displayed upon entry and throughout the cleanroom. Anti-slip floor decals will be deployed within the laboratories to help users visualise occupancy limits and spacing whilst working in the spaces • 5 - Administrative control measures: Gowning room limits are set at max 3 , to allow for 1.5metres social distancing at all times when putting on PPE prior to cleanroom entrance. • 6 - Personal Protective Equipment: Prior to cleanroom entry (within the gowning room), all personal will thoroughly wash their hands, put on shoe covers, hairnet, cleanroom suit, cleanroom hood, cleanroom boots, nitrile gloves, face mask, and safety glasses. (Images attached) Workers to remain diligent in not making contact with their face whilst wearing gloves.	

Risk Factor	7.2 - Human bodily materials (e.g. urine or blood)

Description

Infection as a result of a worker contacting a contaminated surface and then touching their face, eyes or nose.

- 1.0 - Fixed plant (e.g. cool rooms, fume cupboards, safety showers, boilers, lathes, lifts, gas mains, PET scanners) -- No
- 2.0 - Transport and mobile plant (e.g. motor vehicles, forklifts, walky stackers, trolleys and wheelbarrows) -- No
- 3.0 - Powered equipment, tools and appliances (e.g. computers, workshop equipment, kitchen equipment, gas cylinders) -- No
- 4.0 - Non-powered handtools and equipment (e.g. furniture and fittings, ladders, handtools, packing equipment, glassware) -- No
- 5.0 - Chemical materials (e.g. dangerous goods, hazardous substances, poisons and drugs) -- No
- 6.0 - Materials and substances (not otherwise selected from category 5.0) -- No
- 6.3 - Fire and smoke -- No
- 7.1 - Outdoor working environment (e.g. carparks, walkways, outdoor stairs) -- No
- 7.2 - Indoor working environment (e.g. internal rooms, floor surfaces, stairwells) -- No
- 8.5 - Biological materials (e.g. animals, non-living animal materials, microorganisms) -- Yes
- 8.4 - Personal impairment and/or interaction (e.g. pre-existing medical condition, assisting a patient) -- No
- 9.1 - Psychological (e.g. stressful situations) -- No

Low	Low
Existing Controls	**Proposed Controls**
• 2 - Substitution of risk: Shared surfaces within the cleanroom used for training will be wiped down pre/post use with either presaturated IPA wipes &/or Ethanol spray (~70% weight/volume). Decontamination hand pumps at the entrance/exit to all MCN labs and common areas, which will further improve cleanliness of surfaces throughout the facility. • 4 - Engineering control measure: Limit contact with potentially contaminated materials brought into the workplace. Only very specific cleanroom approved items may be taken into this environment. A decontamination station (Ethanol spray ~70% wt/vol) is used to wipe down all items within the gown room prior to clean room entry. • 6 - Personal Protective Equipment: Prior to cleanroom entry (within the gowning room), all personal will thoroughly wash their hands with soap and water, put on shoe covers, hairnet, cleanroom suit, cleanroom hood, cleanroom boots, nitrile gloves, face mask, and safety glasses. (Images attached) Any general use safety glasses will be wiped down pre/post use with either presaturated IPA wipes &/or Ethanol spray (~70% weight/volume). Workers to remain diligent in not making contact with their face whilst wearing gloves.	

Risk Factor	7.2 - Human bodily materials (e.g. urine or blood)

Description

Staff and public who are infectious attend the workplace. It is important to note that there is evidence that people can be infectious before displaying any symptoms.

- 1.0 - Fixed plant (e.g. cool rooms, fume cupboards, safety showers, boilers, lathes, lifts, gas mains, PET scanners) -- No
- 2.0 - Transport and mobile plant (e.g. motor vehicles, forklifts, walky stackers, trolleys and wheelbarrows) -- No
- 3.0 - Powered equipment, tools and appliances (e.g. computers, workshop equipment, kitchen equipment, gas cylinders) -- No
- 4.0 - Non-powered handtools and equipment (e.g. furniture and fittings, ladders, handtools, packing equipment, glassware) -- No
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- 8.5 - Biological materials (e.g. animals, non-living animal materials, microorganisms) -- Yes
- 8.4 - Personal impairment and/or interaction (e.g. pre-existing medical condition, assisting a patient) -- No
- 9.1 - Psychological (e.g. stressful situations) -- No

Low	Low
Existing Controls	**Proposed Controls**
• 2 - Substitution of risk: The government has set restrictions on the maximum size of any gatherings. As this restriction is being constantly evaluated, all areas must ensure that they are working to the latest advice: https://www.health.gov.au/news/health-alerts/novel-coronavirus-2019-ncov-health-alert/how-to-protect-yourself-and-others-from-coronavirus-covid-19/limits-on-public-gatherings-for-coronavirus-covid-19 MCN adheres to these restrictions per the use of its training scheduling system (ACLS) and its max occupants per bay within the cleanrooms. • 3 - Isolation of risk: A temperature self-check thermal imaging station is employed at the MCN to prevent potential affected personal from entering the workplace. (Image attached) • 3 - Isolation of risk: Training within the cleanroom is restricted to only one (1) MCN staff per one (1) client at a time per instrument. This is managed by use of an booking system (ACLS) for scheduling all training. • 5 - Administrative control measures: Signage is placed at entrance to MCN alerting staff and visitors of the risks of COVID-19 and associated symptoms.	

Appendix

Documents Referenced

1. Generic risk framework for conducting work at Monash for COVID-19 (#19214)
2. DHHS material - https://www.dhhs.vic.gov.au/coronavirus-covid-19-transmission-reduction-measures
3. University Australia - Principles and Protocols for Reducing the Potential Risk of COVID-19 Transmission at Universities May 2020
4. Coronavirus disease 2019 (COVID-19) – A guide to the conventional use of PPE, 30 April 2020

Risk Matrix Level	
Negligible	No additional control measures required
Low	Manage by routine procedures at local management level
Medium	Management responsibility must be specified and response procedures monitored
High	Senior management attention needed and management responsibility specified
Extreme	Immediate action required and must be managed by senior management with a detailed plan

Risk Assessment Reviews

Date of Review	Review Team	Summary of Review
12/05/2020		Clone