

Translational Research Consortium for Establishing Platform Technologies to Support Prophylactic and Therapeutic Strategies for Dengue Discovery to Proof-of-Concept

Manipal Academy of Higher Education

Environmental and Health Risk Management Plan

1. Environmental Impact and risk mitigation

Risks	Project Specific Risk	Potential Impact	Mitigation Steps
Air Pollution	Minimal Risk	Running of diesel generators during power failures	Project implementation will not cause any adverse air pollution.
Water Pollution and Waste water treatment	Minimal Risk.	All the laboratory waste is handled by the effluent treatment plant and there is no release of waste water into municipal drainage.	MAHE has an efficient sewage treatment and waste water utilization policy . The institute follows the standard procedures for management of the biomedical waste.
Chemical waste	Minimal Risk..	Chemical waste is disposed as per the biosafety guidelines	Chemical waste is disposed as per the biosafety guidelines
Biological Waste	Minimal Risk..	There will be biomedical waste generated during the collection of patient samples	Inactivated at source by Hypochlorite. Further, autoclaved before handing over to Biomedical waste management agency. The institute follows the standard procedures for management of the biomedical waste.
Heavy metals	Minimal Risk	Project implementation will not cause any	Project implementation will not cause any

		adverse heavy metal waste.	adverse heavy metal waste.
Radiation Waste	Minimal Risk	Project implementation will not cause any adverse radiation waste	Project implementation will not cause any adverse radiation waste.
Destruction/alteration of surrounding ecosystem	Minimal Risk	Project implementation will not cause any adverse destruction/alteration of surrounding ecosystem waste	IBSC approval and GLP practices will be followed.

2. Occupational Health and Safety and risk mitigation

Risks	Project Specific Risk	Potential Impact	Mitigation Steps
Heat Hazards	Minimal Risk	Project implementation aspects will not cause any heat hazards	Project implementation aspects will not cause any heat hazards
Chemical hazards, including fire and explosions	Minimal Risk	Injuries, property loss	Fire Extinguisher, Fire hydrant system is in place.
Pathogenic and biological hazards	Minimal Risk	There will be Blood samples of Dengue patients	Inactivated at source by Hypochlorite. Further, autoclaved before handing over to Biomedical waste management agency The staff shall follow the Standard Precautions, with use of appropriate personal protective equipment
Radiological hazards	Minimal Risk	Project implementation aspects will not cause any radiological hazards.	Project implementation aspects will not cause any radiological hazards.

Noise	Minimal Risk	Project implementation aspects will not cause high noise level.	Project implementation aspects will not cause high noise level.
Process safety	Minimal Risk	Training of Manpower for patient recruitment and sampling and handling of blood samples.	Training of Manpower for patient recruitment and sampling and handling of blood samples.

3. Community Health and Safety and risk mitigation

Risks	Project Specific Risk	Potential Impact	Mitigation Steps
Safety Transportation Management System (for transport of hazardous material)	Minimal Risk	Clinical samples will be transported to laboratories.	Packed in triple layer and transported under cold chain SOPs and training for clinical sample transportation
Emergency preparedness and participation of local authorities and potentially affected communities	Minimal Risk	Localised	Institutional policies and procedures for emergency preparedness
<p>In case your organization already has EHS guideline, please summarise the same. If not, please describe the impact because of hazardous material, release of chemicals, biologicals, management of catastrophic events like fire/explosion. <i>MAHE has organized waste collection and disposal procedures. IBSC committee is operational for project approvals and inspection. Fire exit signs are placed and regular fire drills and trainings are conducted. Manpower training is part of the management process.</i></p>			

Notwithstanding the above other risk (relevant to the project activities) that will be identified in the course shall be addressed as per standard mitigation monitoring parameters and manner of records keeping shall be in accordance to the recommendations of the project monitoring committee on subject experts engaged by BIRAC.