

**Establishment of GMP-compliant National Repository for banking, safe deposit and supply of characterized mammalian cells for use in biopharma**

**National Centre for Cell Science**

**Environmental and Health Risk Management Plan**

**1. Institutional Arrangements**

<b>Requirements</b>	<b>Current Status</b>	<b>Mitigation Steps</b>
Institutional Bio-Safety Committee (IBSC)	NCCS has institutional IBSC committee	Institutional IBSC committee is in place
EHS Team	Not available in NCCS. Provision for recruitment of Environmental, Health & Safety Officer has been made in the project.	Provision for recruitment of Environmental, Health & Safety Officer has been made in the project.
Documentation and Record Keeping in reference to the risks mentioned below and quantifiable records of generated waste and compliance measures.	SOPs are available at site. Waste generation record is maintained in line with compliance of the local law requirement.	The validity and availability of the document shall be monitored periodically and proactive action taken to mitigate if there is any foreseeable risks
SOPs related to Environment Compliance e.g Chemical spillage handling, waste segregation etc.	SOPs are existing at NCCS	Strict adherence to SOP's related to environment compliance
General Safety and Storage	Standard practise followed Project staff and students are provided adequate training and provided with a manual having standard operating procedures	Any inadequacy/accidents are reported to IBSC; appropriate measure are taken to avert further damages to individuals and for the property

**2. Environmental Impact and risk mitigation**

<b>Risks</b>	<b>Project Specific Risk</b>	<b>Potential Impact</b>	<b>Mitigation Steps</b>
Air Pollution	Minimal Risk	Running of diesel generators during power failures	Suitable HVAC system and HEPA filters will be used
Water Pollution and Waste water treatment	Minimal Risk	Project implementation does not create any adverse Water Pollution	Project implementation does not create any adverse Water Pollution

Chemical waste	Minimal Risk	Project implementation does not create any adverse Chemical waste	Project implementation does not create any adverse Chemical waste
Biological Waste	Negligible	Negligible	Standard disposal systems including incineration, autoclaving or inactivation using sodium hypochlorite will be followed
Heavy metals	Minimal Risk	Project implementation does not create any adverse Heavy metals waste.	Project implementation does not create any adverse Heavy metals waste.
Radiation Waste	Minimal Risk	Project implementation does not create any adverse Radiation Waste.	Project implementation does not create any adverse Radiation Waste.
Electronic Waste	Minimal Risk	Project implementation does not create any adverse Electronic Waste	Project implementation does not create any adverse Electronic Waste
Hazardous and C&D Waste	Minimal Risk	Project implementation does not create any adverse Hazardous and C&D Waste	Project implementation does not create any adverse Hazardous and C&D Waste
Destruction/alteration of surrounding ecosystem	Minimal Risk	Project implementation does not create any adverse Destruction/alteration of surrounding ecosystem	Project implementation does not create any adverse Destruction/alteration of surrounding ecosystem

### 3. Occupational Health and Safety and risk mitigation

<b>Risks</b>	<b>Project Specific Risk</b>	<b>Potential Impact</b>	<b>Mitigation Steps</b>
Heat Hazards	Minimal Risk	Project implementation does not create any adverse Heat Hazards	Project implementation does not create any adverse Heat Hazards
Chemical hazards, including fire and explosions	Negligible	Negligible	Suitable PPE and appropriate safety measures will be followed
Pathogenic and biological hazards	Minimal Risk	Project implementation does not create	the project does not contribute to generation

		any adverse Pathogenic and biological hazards	of any specific waste; hence mitigation steps would not be required.
Radiological hazards	Minimal Risk	The project does not contribute to generation of Radiological hazards	the project does not contribute to generation of any specific waste; hence
Electronic Waste	Minimal Risk	The project does not contribute to generation of Electronic Waste	mitigation steps would not be required.
Hazardous and C&D Waste	Minimal Risk	The project does not contribute to generation of Hazardous and C&D Waste	the project does not contribute to generation of any specific waste; hence
Noise	Minimal Risk	The project does not contribute to generation of Noise pollution	mitigation steps would not be required.
Process safety	Minimal Risk	Engineering and equipment maintenance shall be undertaken as per SOPs.	Training of Manpower will be followed.

#### 4. Community Health and Safety and risk mitigation

Risks	Project Specific Risk	Potential Impact	Mitigation Steps
Safety Transportation Management System (for transport of hazardous material)	No hazardous material will be transported	No hazardous material will be transported	No hazardous material will be transported
Emergency preparedness and participation of local authorities and potentially affected communities	Clearance from Pune Municipal Corporations for fire risk and safety will be taken	Clearance from Pune Municipal Corporations for fire risk and safety will be taken	Staff will be trained and quarterly drill will be conducted for different safety norms including use of hose reel provided at each floor level and fire extinguishers.

In case your organization already has **EHS guideline**, please summarise the same. Also, share details of the **EHS Officer/ Contact Person** of the organization. If not, please describe the

impact because of hazardous material, release of chemicals, biologicals, management of catastrophic events like fire/explosion.

**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.**