

**Development of an Affordable, Asia specific 15 valent Pneumococcal Polysaccharide –
CRM197 Protein Conjugate Vaccine
Tergene Biotech Pvt. Ltd.**

Environmental and Health Risk Management Plan

1. Environmental Impact and risk mitigation

Risks	Project Specific Risk	Potential Impact	Mitigation Steps
Air Pollution	Coal fired Boiler Emissions and Stand by DG sets Emissions	Emissions of dust,	Bag filters/multi clones
Water Pollution and Waste water treatment	Process washings, utilities wastewater and Domestic wastewater	Water contamination	Containment, collection , Primary treatment followed by disposal to offsite Common Effluent Treatment Plant (CETP) for further treatment as per regulations
Chemical waste	Off specification/ rejected raw materials, solvents, lab chemicals	Contamination of water or soil and health risk	Segregation, collection , secured storage and disposal to Treatment storage Disposal facility (TSDF) or cement units or agencies authorized by regulators
Biological Waste	All types microbiological wastes, OHC wastes	Health risk	Segregation, collection , secured storage and disposal to Common Biomedical Waste Treatment Facility (CBMWTF)/ TSDF or agencies authorised by regulators
Destruction/alteration of surrounding ecosystem	Specific Project implementation aspects will not cause any adverse ecological effects	Not likely	All Lab practices will be as per standards.

2. Occupational Health and Safety and risk mitigation

Risks	Project Specific Risk	Potential Impact	Mitigation Steps
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Heat Hazards	Burns	Injuries	Insulation to hot surfaces, Personal protective equipment
Chemical hazards, including fire and explosions	Fire	Injuries, property loss	Fire Extinguishers, Fire hydrant system
Pathogenic and biological hazards	Exposure to Pathogens	Health Risk	Bio safety cabinets, controlled working environment with HEPA filters, usage of disinfectants. Immunization of concerned personnel
Noise	High noise	Hearing loss	Acoustic enclosures, silencers and ear plugs/muffs
Process safety	Engineering and Equipment maintenance shall be undertaken as per SOPs	Health Risk	Process risk assessment and engineering controls

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)	Fuels, lab chemicals and reagents, raw materials	Spills	Transportation by RTA approved vehicles for hazardous materials
Emergency preparedness and participation of local authorities and potentially affected communities	Low hazard facility	Localized	Onsite emergency plan, mock drills, communication mechanism to neighbouring industries