

**Lotte Chemical Pakistan Limited
Port Qasim**

PROCEDURE NO.	HSE&S Procedure No. 7.09-01	Page 1 of 4
TITLE	Management of Biological Hazards	
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1. PURPOSE

To provide guidance to Lotte Chemical Pakistan Limited (LCPL) at Port Qasim and the Raw Water Pumping Station for the management and control of Biological Hazards.

2. SCOPE

This procedure covers all those activities of LCPL and Raw Water Pumping Station which have the potential to create a Biological Hazard for its employees, other site users, the local community, the environment or, through transportation activities, the public at large.

It excludes:

- a) Biological Hazards which are endemic to the local area (except where LCPL activities may intensify such hazards) and
- b) The local medical arrangements and procedures for dealing with non-work related infectious diseases.

3. DEFINITIONS

3.1 Biological Hazard

A Biological Hazard consists of a Micro-organism, animal or plant, or their products, which may present a hazard to the health and well being of employees or other persons exposed. Such hazards include infection, allergy and toxicity.

A Biological Hazard may be transmitted through inhalation, ingestion, injection or skin contact.

3.2 Micro-organism

A Microorganism is any microscopic entity, which is capable of replication, including bacteria, chlamydia, rickattsiae, mycoplasma, fungi, parasites and viruses etc.

4. REQUIREMENTS

- 4.1 Director Manufacturing shall ensure that procedures are in place to adequately control biological hazards in terms of operations and activities that may lead in potential exposures to such hazards.
- 4.2 The Technical Manager, HSE & Technical Training Manager and Occupational Health Physician shall jointly assess whether there are any reasonably foreseeable situations where accidental exposure to a Biological Hazard could occur. Appendix-1 details examples of such situations likely to

be encountered on the PTA Plant at Port Qasim and the Raw Water Pumping Station.

- 4.3 The Technical Manager, HSE & Technical Training Manager and Occupational Health Physician shall jointly assess the risk to any personnel (LCPL employees, Contractors or Visitors) associated with the activities or situations identified in Section 4.2 above.
- 4.4 The Technical Manager, HSE & Technical Training Manager and Occupational Health Physician shall jointly decide on the appropriate Control Measures required in each of the activities or situations identified in Section 4.2 above. The Control Measures shall be sufficient to reduce the risks involved to as low a level as is necessary to provide adequately for the health and safety of the workers concerned. Appropriate hygiene practices should be defined and applied where it is assessed that a risk exists.
- 4.5 The Technical Manager, HSE & Technical Training Manager and Occupational Health Physician shall jointly consider the following situations to see if further Control Measures are needed.
 - Areas where Biologically Hazardous Agents are stored and used are suitable, designated and identified by appropriate biohazard signs.
 - The presence of a Biological Hazard during emergency situations.
 - The safe use and disposal of 'sharps' such as scalpels, needles or broken glass in the Medical Center or Laboratory.
 - Decontamination and / or disposal of potentially infected materials and equipment either by autoclaving or incineration.
 - The risk assessment of Biological Hazards is attached as Appendix-3 will be reviewed after every three years.
- 4.6 The HSE & Technical Training Manager shall ensure that Line managers incorporate as appropriate any necessary Control Measures into local Instructions.
- 4.7 The Occupational Health Physician shall advise on what immunization measures shall be given (e.g. tetanus, hepatitis A etc) and for which groups of personnel.
- 4.8 Manager Workshop & Site Development shall ensure that cutting oil used in workshop is assessed for Biological Hazards and mitigation is in place.

5. COMMUNICATION AND TRAINING

- 5.1 The Departmental Managers shall ensure that all Managers receive training on this procedure.

- 5.2 Line Managers shall ensure that all personnel likely to be exposed to Biological Hazards are given training and information on the hazards and risks involved and the necessary documentation is maintained.
- 5.3 The Occupational Health Physician shall ensure all Medical Staff are updated on the contents of this procedure.
- 5.4 The Administration Manager shall ensure the Catering Contractor is given guidance on the risks of Biological Hazards and the Control Measures necessary.

6. DOCUMENTATION

- 6.1 Appendix-1 Typical Situations Involving Biological Hazards
- 6.2 Appendix-2 Guidance on Legionellosis
- 6.3 Appendix-3 Risk assessments of Biological Hazards

7. AMENDMENTS

This is the eighth revision.