

Pollution Research Group
Hazard Identification Risk Assessment (HIRA)

Introduction:

In terms of the requirements stipulated under Sections 8 and 13 of the Occupational Health and Safety Act 85 of 1993, it is imperative to identify, document and communicate hazards and risks in all work areas and activities with researchers. To implement strategic measures to either treat, tolerate or terminate the hazards and risks identified. The Risk Assessment Process includes site visits, job observations, understanding work processes, laboratory operations and discussion with employees and management.

Purpose

The purpose of this assessment is to identify potential hazards and risks prevalent on the project and to examine existing health and safety control measures and to make appropriate recommendations where the control measures may be inadequate or non-existent.

Aim

The aim of this assessment is to eliminate or reduce the hazards and risks identified as far as is reasonably practicable. Hence, ensuring a healthy and safe work environment on all PRG projects.

Scope

This document is applicable to researchers and students of The Pollution Research Group.

Definitions

Hazard – is the source of or exposure to danger

Risk – is the probability that an injury will occur

HIRA_ Field Sampling

Version:

Technician Signature:

Name:

Signature:

Date:

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Title Of Activity	Location of Activity	Address of location	Person in Charge	Contact Number
Start /End -Dates/Times	Brief Description (or attach SOP)			
<i>SECONDARY CONTACT IN CASE OF EMERGENCY</i>				
Name:	Address:	Phone numbers:		Email:
<i>LIST OF INDIVIDUALS ON TRIP (by separate notification if necessary)</i>				
Name:	Address:	Phone number:		Email:
<i>PRG CONTACT DETAILS</i>				
Operations Manager Rebecca Sindall 0725520311	Laboratory Manager Merlien reddy 0837574682	Police 10111	Ambulance 082911	From Cell 112

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Task Safety Analysis: Sample collection from sanitation facility field locations

List Major Task Steps	What are the Hazards	What are the risks	Risk Level (H/M/L)	Type of risk (S/H/E)	Probability Level (F/O/S)	Control Measures(PPE/Safe Work System/Engineering control/Substitution/Elimination)	Risk level after control
Transport: Travel to field location	Travel during trip	- Road accident causing injury - Delays - Individuals getting lost	medium	Safety	Occasional	<ul style="list-style-type: none"> Brief group on itinerary and schedule Roadworthy vehicles Check vehicle insurance Driver to have appropriate license. Inform person at office of intended destination and estimated return time(travel time table); provide full contact details of all team members involved in the trip; ensure there are enough fully recharged mobile phones. 	Low
Local issues:	Protests	Personal danger	medium	Safety	Occasional	<ul style="list-style-type: none"> Research and schedule accordingly 	
	Crime	Accident or assault causing injury	high	Safety	Frequent	<ul style="list-style-type: none"> Be aware of emergency escape routes 	
	Weather conditions	Risk of dehydration, sunburn	high	health	frequent	<ul style="list-style-type: none"> Keep group together Keep group informed of all details and advise on suitably dressed /equipped. 	
Collect representative samples from facility into small containers	Biological samples	- Pathogen risk from contact with excreta -spillage of sample	Medium medium	Health Safety& environ	Occasional Seldom	<ul style="list-style-type: none"> Lids to be well fitted to sample containers before being removed from the facility. 	Low

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						<ul style="list-style-type: none"> • PPE to be worn, including safety boots, overalls, nitrile and sharp-resistant gloves, dust masks, goggles. • Vaccinations against Hepatitis A and B, tetanus and typhoid; prophylactic use of anti-worm medicines. • In case of spillages/ splashes: <u>environment</u>: spill to be cleaned with water and paper towels; see SOP/Biological spills; <u>person</u>: rinse affected area with water, dry with paper towel, spray with 98% Ethanol; see SOP/Biological spills 	
	Members of the public	- Risk of conflict with members of public	medium	safety	Occasional	<ul style="list-style-type: none"> • Liaise with relevant officials at municipality • Arrange introductions to caretaker and/or householder in charge of facility before starting sampling, ensure they are kept informed about activities taking place • Use local facilitators where advised to do so by municipality 	Low
Transport of sample from field location to lab	Road Biological samples	- Road accident - Sample spill	medium	Safety	Occasional	Roadworthy, appropriately insured vehicles with seatbelts for all occupants to be used. Driver to have appropriate license. Lids to be fitted well to sample containers and placed in a bigger container before being removed from the facility	Low

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						In case of spillages/ splashes: <u>environment</u> : spill to be cleaned with water and paper towels; see SOP/Biological spills; <u>person</u> : rinse affected area with water, dry with paper towel, spray with 98% Ethanol; see SOP/Biological spills	
Storage of sample at lab	Biological sample	- Samples transported to and stored in an unsafe manner resulting in contamination risk to environment and/or personnel	low	Safety Environ	Seldom	<ul style="list-style-type: none"> • Samples to be labeled appropriately whilst in the field and sample number recorded on paper record • Full sample containers to be taken from vehicle, through basement access door to lab and placed immediately in coldroom • Paper record of samples to be transferred to database 	Low
Cleaning/ washing of PPE	PPE	- PPE stored /exposed and disposed in an unsafe manner resulting in contamination risk to environment and/or personnel	low	Health environ	Seldom	<ul style="list-style-type: none"> • Sharps-resistant gloves to be washed/ sprayed with ethanol, then placed in a plastic bag and washed well in the lab using anti-bacterial detergent. • Overalls and safety boots to be placed in plastic bags before leaving the field, then washed/ placed for washing within the same day in the lab. 	Low

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						<ul style="list-style-type: none"> • Latex gloves and dust masks to be placed into a separate plastic bag and disposed in allocated areas for contaminated wastes within the lab. • Goggles to be washed and disinfected in the lab. 	
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Determining Needs to Perform the Task Safely

PPE REQUIRED X	SPECIALISED PPE X	GENERAL SAFETY X	FIRE PROTECTION X
Overalls (long leg long arm)		First Aid kit available	Emergency numbers available
Latex gloves	Sharps-resistant long sleeve thick plastic gloves	98% Ethanol spray	Emergency escape route identified
Face shield/protective goggles			
Dust mask			
Safety shoes			
Emergency Instruction and first aid			
Working out of hours			
Working with power tools			
Any special monitoring			
Working at heights			

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